

Office of River Protection
Quarterly Milestone Review Meeting Minutes

Washington State Department of Ecology
3100 Port of Benton Blvd
Richland, Washington

May 19, 2016



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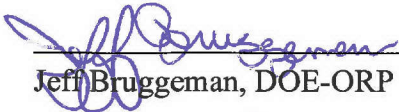
CONCURRENCE SIGNATURES

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Project Managers' Meeting.



Wahed Abdul, DOE-ORP

Date: 6/13/16



Jeff Bruggeman, DOE-ORP

Date: 6/13/16



Joni Grindstaff, DOE-ORP

Date: 6/14/16



Paul Hernandez, DOE-ORP

Date: 6/8/16



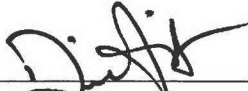
Jeremy Johnson, DOE-ORP

Date: 6/8/16



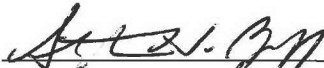
Chris Kemp, DOE-ORP

Date: 6-13-2016



Dan Knight, DOE-ORP

Date: 6-20-2016



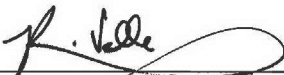
Steve Pfaff, DOE-ORP

Date: 6/8/2016



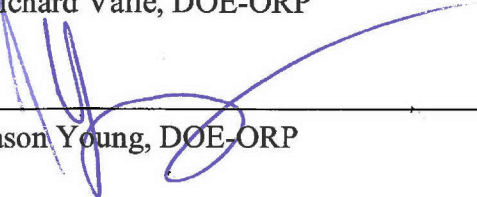
Glyn Trenchard, DOE-ORP

Date: 6-10-16



Richard Valle, DOE-ORP

Date: _____



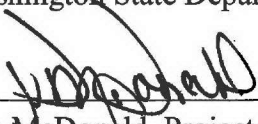
Jason Young, DOE-ORP

Date: 6/20/16


for

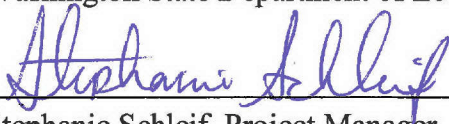
Jeff Lyon, Project Manager,
Washington State Department of Ecology

Date: 6/21/16



Dan McDonald, Project Manager,
Washington State Department of Ecology

Date: 6-21-16



Stephanie Schleif, Project Manager,
Washington State Department of Ecology

Date: 6/27/16

TRI-PARTY AGREEMENT MILESTONE REVIEW AND MONTHLY SUMMARY REPORT

1.0 ADMINISTRATIVE ITEMS/MILESTONE STATUS

Upcoming Meetings

The next Office of River Protection (ORP) quarterly milestone review is scheduled for August 18, 2016, from 8:30 a.m. to 11:30 a.m. at the Ecology office in Richland, Washington. The next ORP project managers meeting (PMM) is scheduled for June 15, 2016, from 1:00 p.m. to 3:30 p.m. at the ORP office in Richland, Washington.

Recent Items Entered/To Be Entered into the Administrative Record

U.S. Department of Energy (DOE), ORP provided the monthly Tri-Party Agreement (TPA) and Consent Decree (CD) reports, which will be submitted to the Administrative Record. ORP reported that the Department of Justice (DOJ) has been in discussions with the state Attorney General's office regarding the due dates for the quarterly reports. ORP's understanding is that the first quarterly report will be submitted by July 31, 2016, and will cover the previous three months of activities. ORP noted that the quarterly reports used to be submitted on Friday, and they will now be submitted on Monday.

Tri-Party Agreement Milestone Status

ORP stated that there was no change to the milestone status since last month. Washington State Department of Ecology (Ecology) asked if the status of M-045-84 will be addressed. ORP responded that a status would be provided during the single-shell tank closure program portion of today's meeting.

Office of River Protection/Washington State Department of Ecology Tri-Party Agreement and Consent Decree Agreements, Issues and Action items – May 2016

The action items were discussed and updated as follows (see agreements, issues and action items table):

Action No. 1 (TF-15-06-01)

ORP stated that this action was closed during the last PMM held April 21, 2016.

Action No. 2 (TF-15-10-02)

ORP stated that it is coordinating with Ecology to schedule a meeting in June 2016 to provide a flow sheet on the mass and energy balance associated with the Direct Feed Low-Activity Waste (DFLAW) program. This action remains open.

Action No. 3 (TF-15-10-03)

ORP stated that a write-up was provided to Ecology for the Liquid Effluent Retention Facility (LERF) basins. Ecology stated that it will review the information and provide any comments by email. Ecology agreed that ORP met the action, and that this action could be closed. This action was closed.

Action No. 4 (TF-16-01-01)

ORP noted that Ecology was included in the recent 3D model review associated with Low-Activity Waste Pretreatment System (LAWPS), and asked if Ecology had received additional presentations regarding technical details or as part of the permitting process. Ecology responded that it had not received additional information. ORP stated that the intent is to present the technical details in line with the sections of the permit modification request that is being produced. ORP stated that the next complete set of drawings that will be available is the 60 percent design review. ORP noted that the 60 percent design review won't be ready for a few months, and an effort will be made to provide Ecology the process information leading up to the 60 percent. Ecology asked if it will be invited to attend the 60 percent design review. ORP responded that Ecology will be invited to attend. This action remains open.

Action No. 5 (TF-16-01-02)

ORP stated that this action is a continuation of action No. 2, and it will be tied into the LERF/ Effluent Treatment Facility (ETF) discussion. This action remains open.

Action No. 6 (TF-16-01-03)

ORP stated that this action relates to the higher than expected radiological contamination levels in the soil during the legacy duct work, and efforts are under way to provide the requested information to Ecology. This action remains open.

Key Documents List

ORP provided an updated key documents list.

2.0 SYSTEM PLAN

ORP stated that the history of System Plan 7 is still being carried in the monthly summary report, and there have been discussions with Ecology about how much of the information should be maintained. ORP noted that meetings on System Plan 8 have started, and it will be reported in next month's summary report. ORP stated that there have been three or four discussions with Ecology to provide a status from a planning perspective regarding the activities in the past year. ORP added that it is working toward the scenario selection to meet the October 31, 2016 milestone due date. Ecology stated that there had been internal discussion regarding ORP's emails communication, and requested another month to consider how much information to carry forward regarding System Plan 7.

Ecology inquired about the status on releasing the modeling that was done last summer in support of a base case scenario. ORP responded that the modeling effort was associated with the

CD and not releasable at the time, and efforts are under way with legal to release the information.

3.0 ACQUISITION OF NEW FACILITIES

ORP stated that extension requests regarding the M-090-13 and M-047-07 dispute have been processed for a month or two at a time while the CD was in judicial review. ORP indicated that the parties should be able to make progress with dispute resolution since the CD has been amended, and that there was a recent discussion with Ecology. ORP noted that the extension request expires tomorrow. Ecology stated that a shorter extension of 30 days would be preferable and it would give the parties enough time to determine the path forward. ORP stated that a 30-day extension request for both of these milestones will be routed for signature today.

4.0 SUPPLEMENTAL TREATMENT AND PART B PERMIT APPLICATIONS

ORP stated that milestone M-062-45ZZ, to negotiate a one-time supplemental treatment selection, was meant to coincide with the System Plan 7 process and identify any other technologies besides vitrification that were proposed. ORP added that ultimately a negotiated decision (regarding supplemental treatment selection) must be reached with Ecology. ORP stated that this milestone has been in dispute, and the dispute will be extended another 30 days. ORP noted that this dispute will be the most complicated in terms of the appropriate timing for identifying the supplemental treatment schedule. Ecology stated that the issue wasn't necessarily the one-time supplemental treatment, but there are several milestones that use M-062-45ZZ as an anchor, and the milestones are associated with the permitting schedule. Ecology added that an understanding of ORP's permitting schedule is needed. ORP clarified that the permitting schedule Ecology was referring to was the project permit schedule. Ecology responded that it was the project permit schedule. ORP stated that the intent is to provide the information that Ecology needs.

ORP stated that there will be a struggle to have any kind of technical basis for the decisions associated with a supplemental treatment selection and the target milestones that are supposed to be converted to interim milestones until System Plan 8 is established. ORP noted that System Plan 8 will provide a lifecycle view of the tank waste cleanup mission. System Plan 8 is scheduled to be released in October 2017.

5.0 242-A EVAPORATOR STATUS

ORP noted that the past evaporator campaign (EC) waste volume reductions have been included in the monthly summary report. The most recent campaigns (EC-04 and EC-05) resulted in a year-to-date waste volume reduction of 304,000 gallons. The EC-06 campaign is scheduled for early August 2016. Currently there is an outage to complete electrical upgrades, redo the control room, and installing variable frequency drives in one of the pumps. ORP stated that the evaporator is on track to complete the planned campaigns this year.

Note: See discussion under the CD section regarding the spare reboiler requirement status.

6.0 LIQUID EFFLUENT RETENTION FACILITY/200 AREA EFFLUENT TREATMENT FACILITY

ORP stated that the LERF basin volumes are reported for the month of April 2016. ORP reported that the activities under the first bullet for significant planned actions in the next six months have been completed. Those activities include staff training, component and system testing, and the readiness activities, which are in the form of an operational readiness checklist (ORC) that has been signed by Washington River Protection Solutions (WRPS) management. ORP noted that some component issues are being addressed, which are not unexpected, and full operation for processing basin 43 is anticipated in the near future. Ecology inquired about the component issues and are these on the secondary treatment train. ORP responded that there were a couple valves in the main treatment train have been addressed via a developed work package, and the valves do not impact operations. However, on the secondary treatment train, ORP added that a pump associated with the thin film dryer will be replaced with a spare over the weekend, and the pump will be running by Monday. ORP stated that the facility was able to process and incur backlog into the concentrate tanks and then process with the thin film dryer.

ORP noted that the permit modification package was submitted to Ecology. Ecology requested a meeting with ORP and WRPS to discuss the comments that Ecology submitted. ORP responded that it will follow up with scheduling a meeting.

ORP reported that the plant is operating and is producing verification water as waste is being processed through the main treatment train. Basin 43 is the first basin that will be processed, and the contents have been moved into the surge tank and that verification water is being produced. ORP stated that four million gallons are to be processed by the end of this fiscal year in two two-million gallon batches with a two-week outage in between. The plan is to complete processing the remainder of basin 43 by the end of calendar year 2016.

Ecology initiated a discussion regarding the Integrated Disposal Facility (IDF) performance assessment (PA), and stated that there are a variety of themes as to the amount of liquid and whether solids are going to be created in LERF/ETF. Ecology inquired about access to information regarding planning assumptions for LERF/ETF and what the configuration is likely to be to support DFLAW. ORP responded that Ecology's inquiry is part of the discussion associated with action Nos. 2 and 5 (see action item table). ORP stated that currently the configuration for ETF will remain the same, and a follow-on discussion could be held during the flow sheet discussion. Ecology noted that there is a consideration of accommodations for solids, and the idea has been raised again about a Cast Stone or some sort of monolith waste form to accommodate the solids in LERF/ETF. ORP stated that there are considerations of the liquid form being grouted, and that could be part of the flow sheet discussion.

7.0 TANK SYSTEM UPDATE

Double-Shell Tank (DST) Integrity - ORP noted three enhanced annulus video inspections were completed, and the remaining inspections are on schedule to be completed by the end of September 2016.

Single-Shell Tanks (SST) Integrity – ORP reported that the four in-tank video inspections are on track to be completed by September 2016.

8.0 SINGLE-SHELL TANK INTEGRITY ASSURANCE

ORP stated that the milestone for the Independent Qualified Registered Professional Engineer (IQRPE) is on schedule to be completed by September 30, 2018. Ecology pointed out the work initiated on T-112 for intrusion, and noted that inquiries have been made about the basis for designating T-112 as a known intrusion tank. ORP responded that the rationale behind deployment of the ventilation system wasn't solely based on intrusion, but it was also free liquid that becomes a dragging mechanism. ORP took an action to provide Ecology the basis for initiating work on T-112 as an intrusion tank.

ORP Action 1: ORP will provide Ecology the basis for ventilation work on T-112 as an intrusion tank.

9.0 IN-TANK CHARACTERIZATION SUMMARY

ORP noted that the AP-102 sampling is in support of AY-102 retrieval, and the C-111 sampling is standard procedure following retrieval to obtain tank characterization.

10.0 TANK OPERATIONS CONTRACT OVERVIEW

ORP provided an update on the favorable schedule variance in base operations (5.01). ORP noted that the information is from March 2016, and the monthly summary reporting is always two months behind. ORP stated that it had been a struggle to get retrieval going in AY-102, and resources were focused on that effort. ORP reported that currently retrieval is at 94 percent in AY-102, and there has been a pause in retrieval to remove the modified sluicers and install four enhanced reach sluicers, which has been completed.

The unfavorable schedule variance for retrieve and close (5.02) was due to work stoppages associated with the self-contained breathing apparatus. ORP stated that work being done in C Farm was completing sampling at C-111 and efforts to deploy a third retrieval technology at tank C-105. The work being done in A/AX Farms was installing the retrieval systems into AX-102 and AX-104 tanks. ORP noted that the unfavorable cost variance was associated with installing ventilation equipment in AX-102 and AX-104. The two tanks need to be ventilated while waste disturbing activities are done with removal of legacy equipment, and the tanks are being tied into portable 127.

ORP stated that from a fiscal year-to-date perspective, treat waste operations (5.5) is behind schedule \$4 million, and about \$2.2 million is due to the delay in procurement of the Microbeads resin. ORP noted that the resin is in Seattle being cleared through customs. ORP stated that there has been a delay in areas of the system integration and primary treatment facility system design drawings incentive as a move is being made toward a different safety design strategy. ORP stated that the negative cost variance of \$277K is due to the delayed receipt of the microbeads resin. Ecology inquired about the status of procuring the microbeads resin on a production level. ORP responded that it is entering into a long-term strategy with microbeads, and the plan is to procure about five years' worth of protection resin over the next two years. A temperature-controlled warehouse is being built on site to store the resin, as well as equipment.

11.0 SINGLE-SHELL TANK CLOSURE AND RETRIEVAL PROGRAM

Closure Program - ORP noted that the Resource Conservation and Recovery Act of 1976 (RCRA) Facility Investigation (RFI) report is on schedule to be submitted in December 2016 (M-045-61A). ORP stated that since 2010, the logic for closure milestones for Waste Management Area (WMA)-C has lined up with a submittal, followed by two later submittals. ORP noted that Ecology needs to have the groundwater information within the RFI to be able to do the RCRA process. ORP added that previously the plan was to defer to the 200-BP-5 Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Record of Decision (ROD) in the remedial investigation/feasibility study (RI/FS) process. ORP stated that it recently proposed a high level logic to Ecology, and Ecology will provide a response within four weeks. ORP stated that if Ecology accepts the proposal, there would be some milestone changes and the logic could be better lined up for the RFI within WMA-C and the 200-BP-5 RI.

ORP reported that a meeting is scheduled with Ecology on May 25, 2016 regarding M-045-82. ORP stated that the schedule logic that was proposed to Ecology will be discussed, which is predicated more on the time sequence of submittals rather than a parallel sequence. ORP noted that this dispute has been extended to August 1, 2016, which will be signed today.

ORP noted that the status of M-045-84 is at risk, and stated that discussions with Ecology are needed to work through ORP's proposed schedule logic. ORP expressed confidence about moving forward with negotiations on the second waste management area when the schedule logic is laid out for WMA-C. ORP noted that the second WMA is A/AX. ORP stated that the last time this milestone was discussed during the Inter-Agency Management Integration Team (IAMIT) meeting, the situation was reversed. ORP stated that the status of the milestone was on schedule, and Ecology questioned why the status wasn't at risk. ORP added that the reason was since there wasn't a schedule and C Farm was at risk as well, the question was how to set everything out in a series with C Farm coming before A/AX Farms.

Ecology responded that one of the concerns is since retrieval activities were starting in A/AX Farms, a discussion is needed about the schedule. Ecology added that a letter has been drafted requesting the start of negotiations. ORP responded that the intent is to maintain continuity with what is being done in C Farm when proposing a logic for A/AX Farms. Ecology indicated that it would follow up internally to initiate discussions with ORP.

ORP stated that M-045-62 is on schedule, and noted that it will tie in with the integration between groundwater and vadose zone closure corrective actions at WMA-C and will be part of the proposed logic that Ecology is reviewing.

ORP stated M-045-85 is on schedule to complete negotiations for interim milestones for closure of remaining WMAs.

ORP noted that M-045-92, the interim barriers, is in dispute at the IAMIT level, and will be discussed later today during the IAMIT meeting.

Retrieval Program - ORP stated that retrieval in C Farm is finishing up and moving over to AX Farm. The first tanks in AX Farm will be AX-102 and AX-104. ORP stated that a retrieval data report (RDR), which is required under M-045-86, will be submitted to Ecology by the end of

September 2016 for C-102. An RDR submittal for C-111 will follow in November 2016. ORP noted that post-retrieval sampling will be done in C-111 in late May, early June 2016. ORP expressed appreciation to Ecology for its support with the C-111 Tank Sampling and Analysis Plan (TSAP).

12.0 TANK WASTE RETRIEVAL WORK PLAN STATUS

ORP reported that the Tank Waste Retrieval Work Plans (TWRWPs) for AX-101 through 104 have been developed, and the risk assessment comments are being resolved. ORP indicated that the four TWRWPs should be finalized by late June 2016. ORP noted that the TWRWP table will be updated to reflect the AX tanks. ORP stated that a draft TWRWP for a third retrieval technology in C-105 is in Ecology review, and it will be formally submitted to Ecology within two months.

13.0 APPENDIX H STATUS – SINGLE-SHELL TANK WASTE RETRIEVAL CRITERIA

ORP stated that C-106 is in Appendix H review, and it is not a CD tank.

14.0 TANK RETRIEVALS WITH INDIVIDUAL MILESTONES

There was no change in status to report.

CONSENT DECREE MONTHLY SUMMARY REPORT REVIEW

1.0 CONSENT DECREE MILESTONE STATISTICS/STATUS - CONSENT DECREE REPORTS/REVIEWS

ORP stated that discussions are under way between the DOJ and the state Attorney General's office regarding the due dates for milestone D-16C-03. ORP stated that the first quarterly report will be submitted by July 31, 2016, and the report will cover the previous three months of activities. ORP added that the summary reports will now be submitted on a Monday instead of Friday. ORP noted that milestone D-006-00-B is due by October 25, 2016, and the parties need to consider when the meetings need to occur to review the CD.

ORP announced that there has been a change in assignment for the Waste Treatment and Immobilization Plant (WTP) team, and an integrated approach has been taken for the DFLAW project. The three federal project directors for Low-Activity Waste (LAW) Facility, Balance of Facilities (BOF) and Analytical Laboratory (LAB) is also known as (LBL) will now be able to interchange within the DFLAW management.

The reports, agreements, issues, and actions were discussed and updated as follows:

Action No. 1 (WTP-14-10-01)

ORP stated efforts are under way to coordinate discussions with Ecology regarding this action along with some tank farms discussions. This action remains open.

Action No. 2 (WTP-14-10-04)

ORP stated that an email was sent to Ecology yesterday (5/18/16) with dates for a comprehensive briefing either next Tuesday or Wednesday. ORP stated that the briefing would include the technical issue status for Pretreatment (PT) Facility and any additional action items that are outstanding for PT. ORP referred to action No. 3 as part of the briefing. This action remains open.

Action No. 3 (WTP-14-10-05)

ORP noted that this action will be included in the briefing under action No. 2. ORP stated that this action should be changed to a three-year work plan instead of a two-year work plan. This action remains open.

Action No. 4 (WTP-14-06-02)

ORP stated that this action will be included in the briefing under action No. 2. Ecology suggested that ORP put together an agenda for the briefing, and Ecology could review it and provide comments. ORP agreed that a collaborative agenda was a good plan, and stated that a draft agenda would be provided to Ecology today. This action remains open.

Action No. 5 (WTP-14-04-01)

See action No. 4. This action remains open.

Action No. 6 (WTP-15-01-01)

See action No. 2. This action remains open.

Action No. 7 (WTP-15-06-01)

ORP stated that it is reviewing the information Bechtel provided regarding the corrosion simulant basis document, and there is no time line for completing the document. ORP noted that the Senior Technical Authority (STA) will be present during the briefing next week (see action No. 2), and an update could be provided at that time when the document will be ready to be shared. ORP stated that the preference is to provide Ecology with the final version of the document and not a draft. Ecology noted that the expectation is a corrosion simulant basis document that includes a technical basis and calculations. ORP stated that when technical issues 1 through 4 are discussed during the briefing, particularly the erosion/corrosion technical issue, some of the information related to the corrosion simulant basis document will be provided. Ecology referred to the agenda for the briefing (see action No. 4), and requested that the corrosion simulant basis document be included on the agenda. This action remains open.

Action No. 8 (WTP-16-02-01)

This action will be included in the briefing next week (see action No. 2). This action remains open.

SPARE REBOILER REQUIREMENT STATUS

ORP noted that two CD milestones were recently created. ORP stated that the first milestone is to purchase the spare reboiler, which is due December 31, 2016, and it is on track to meet the procurement release. ORP added that following the procurement, there are two additional years to build the reboiler and have it available onsite, which is also on track. Ecology inquired about the phrase procurement release. ORP responded that the milestone states a reboiler must be purchased, and the original language was procure a reboiler. ORP stated that it is equating purchase and procure to the same thing in the first milestone, and that involves awarding a contract. Ecology asked if ORP expects to have the contract awarded in December 2016, and then proceed with building the reboiler. ORP responded that it is on track to meet that date.

ORP reported that when the activities are completed during the outage and the power comes back on, laser scanning will be done in the back room for the reboiler to get the exact specifications for the procurement award. Ecology asked if the laser scanning will be done before or after the EC-06 campaign. ORP responded that there had been discussions about doing the laser scanning before or after EC-06, and currently it is planned after EC-06.

2.0 SINGLE-SHELL TANK RETRIEVAL

ORP noted that page 7 of today's monthly summary report reflects a series of milestones that were updated through the amended CD ruling. ORP stated that C-102, C-105, C-111, AX-102 and AX-104 are the five tanks that need to be retrieved to meet milestone D-16B-03 by December 31, 2020.

3.0 TANK WASTE RETRIEVAL WORK PLAN STATUS

The CD TWRWP table is identical to the TPA TWRWP table. See discussion under TPA TWRWP status.

4.0 SINGLE-SHELL TANK RETRIEVAL MONTHLY FISCAL YEAR EARNED VALUE MANAGEMENT SYSTEM DATA

The Earned Value Management System (EVMS) data is the same as reported in the TPA section of today's monthly summary.

5.0 WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT

ORP referred to the statement in the monthly summary about the cumulative-to-date cost and schedule variances being based on the progress of the LBL internal forecast, and provided an update about why WTP was being managed to an internal forecast. ORP noted that the DFLAW initiative is new, which required a change to the contract and the baseline that manages the LAW Facility. ORP stated that a baseline change proposal was submitted by Bechtel in December 2015 for review and comment, and a federal baseline change proposal was created that is progressing through a series of approval steps in the Secretary of Energy's office. An external independent review was conducted, which is a required step to a baseline change, and phase 2 was recently completed that looked at cost and schedule.

ORP stated that in parallel to the baseline development, it has been working on the contract modifications, which involves a set of negotiations. ORP noted that while negotiations are under way they cannot be discussed, but they are progressing well and are expected to be completed over the summer.

ORP stated that the thermal catalytic oxidizer (TCO) which is part of the ventilation system was received onsite in five different flatbed shipments, and it took a month to get the entire system into the LAW Facility. The TCO is currently staged at the 48-foot elevation, although it is not in its final location. ORP is waiting for receipt of the permit from Ecology, and when the permit is effective, the TCO can be put in place. ORP stated that the caustic scrubber is the final large piece of equipment to place in the LAW Facility, and it will be located right below the hatch. ORP noted that a permit is not needed for the caustic scrubber.

ORP noted that the installation of the pulse jet mixers (PJM) in the vessel at Greenberry Industrial was completed, and the vessel will be used for some of the testing for the standard high solids vessels for PT Facility.

ORP stated that the preliminary documented safety analysis (PDSA) that was approved for the Effluent Management Facility (EMF) will allow procurement of items for the EMF. ORP noted that the EMF is in design and has had some construction progress.

ORP stated that when the PDSA change package for the hydrogen in piping and ancillary vessels (HPAV) is approved, that will close one of the technical issues for PT Facility.

6.0 PRETREATMENT FACILITY

ORP provided a brief history regarding the status of the PT Facility starting in 2012, when there was a transition to focus on technical issues. In 2014, the first two-year work plan was implemented, transitioning away from the baseline and moving to an internal forecast. Currently PT Facility is utilizing the internal forecast as the baseline moving forward, and Bechtel has taken earned value from the internal forecast. ORP stated that there are no longer any baseline change proposals (BCPs) during this time frame, and there is a procedure that Bechtel is following if there are any changes, which are internal forecast trends.

ORP stated that the plan is to resolve the technical issues by fiscal year (FY) 2018, and that is based on the current three-year work plan. ORP noted that the internal forecast only goes through FY 2018, and there are discussions about how to move forward beyond that time frame with production engineering.

ORP reported that the receipt of the standard high solids test vessel is about a month-and-a-half ahead of schedule, and it is expected in the late July 2016 time frame. ORP stated that the HPAV PDSA change package is expected to be completed in the next 30 days, and it will be part of the discussion during the briefing next week (see action No. 2). Ecology stated that its team has generated information that it believes is appropriate to consider for technical issue resolution, and once it has been approved by management, Ecology will provide it to ORP. Ecology expressed a concern as to whether or not some of the older issues, other than the eight technical issues, are being given full value in light of the changes that are occurring in PT Facility. Ecology cited the installed tanks that had structural issues, the bottom drain issues, and possibly PJM issues as examples that need to be considered to ensure that the system will function as needed. ORP agreed with Ecology's concern, and stated that that could be part of the discussion.

Ecology asked if the HPAV PDSA change package, the proposed controls for hydrogen events engineering study, and the PJM controls phase 3 test specifications will be available when they are issued. ORP responded that those documents would be available to Ecology.

7.0 HIGH-LEVEL WASTE FACILITY

ORP reported that currently Bechtel's efforts are focused on accomplishing everything that needs to happen to get full authorization, which includes procurement and construction. Bechtel is still currently only released to the engineering design and some limited civil construction. The major focus is the disposition of all the design and operability (D&O) review comments that resulted from the D&O review report. Ecology asked if a decision has been made to conduct a D&O review on the rest of the equipment. Ecology noted that the D&O review that was done yielded serious results for part of the equipment, and expressed a concern that there would be too long of a period before a review is conducted on the rest of the equipment. ORP responded that Bechtel has been given a funding profile to develop a replan for how much progress could be made on HLW Facility. ORP noted that the replan will take into account resolution of the D&O review comments and the technical issues that are related from both HLW and PT Facilities.

Ecology stated its concern in a different way and expressed a concern about confirming that the rest of the systems and equipment in HLW will not be impacted. ORP acknowledged Ecology's concern. ORP stated that the revised engineering process that is now required for Bechtel

includes system design reviews at 30 percent, 60 percent and 90 percent. ORP noted that a major piece of the system design review is focused on the operability side, which provides a means to identify any issues. ORP added that the system engineering management plan that Bechtel has put forward includes development of the system design description (SDD), which captures requirements and the validation of those requirements. ORP stated that many of the requirements are operability requirements, and a multi-faceted team in operations plays a major role in the design review process. ORP noted that the system engineering management plan functions to identify issues along the process and not just catching issues at the end of the process. Ecology acknowledged ORP's process, and stated that the objective is to identify issues early enough so that impacts can be quickly determined. ORP agreed, and stated that is why it is focusing on getting the D&O issues dispositioned. ORP added that many of the D&O issues will be dispositioned by the engineering studies, and many of them will be combined instead of being isolated issues.

ORP suggested an action to follow up with the engineering studies that support closure of the D&O review at HLW. Ecology agreed with ORP's suggestion.

ORP Action 1: ORP to provide Ecology with the engineering studies that support closure of the D&O review at HLW Facility.

Ecology stated its understanding is that the engineering studies vet every piece of information, but that doesn't necessarily mean there is a specific resolution for closure. ORP agreed that that is typically the process. ORP added that the purpose of dispositioning the D&O items is to clearly define and conduct any evaluations necessary to determine the outstanding work scope, and the work scope could mean calculation revisions or further work.

ORP reported that the high-efficiency particulate air (HEPA) filter testing at Mississippi State University (MSU) has shown positive results with the filter exceeding all the conditions for LAW Facility and all of the known conditions for HLW Facility. ORP noted that MSU was approved for Nuclear Quality Assurance (NQA)-1 testing for the HEPA filter testing. ORP stated that the design evolution testing was not NQA-1, and when the filter is qualified for use in HLW Facility, it will be NQA-1 testing. Ecology asked if any other testing will need to be done or it will just be to requalify the paper. ORP responded that just the paper needs requalified, which has been done.

ORP noted that under significant planned activities in the next six months, submittal of the full facility update draft PDSA revision is expected in mid-August 2016, and the final submittal to ORP is expected in November 2016.

8.0 LOW-ACTIVITY WASTE FACILITY

ORP stated that the baseline contract negotiations are ongoing, and commodity installation continues in the LAW Facility. The TCO and the ammonia dilution skid have been staged, and ORP is waiting for receipt of the permit from Ecology on those components. ORP noted that the subcontractor work scope in the annex was completed, and the contractor is moving into the control room and starting to do some work in the annex in the LAW Facility.

ORP stated that additional welds will be done on the melter shield lids. Currently there are tack welds on the lids, and the thermal stress analysis showed the need for additional welding. ORP

offered to schedule a briefing with Ecology regarding the additional welds. Ecology stated that it would be helpful to include the lessons learned from the first melter lid to ensure the second melter lid is done in a quality way.

ORP Action 2: ORP to schedule a briefing with Ecology regarding the additional welds on the melter shield lids and the lessons learned from the first melter lid.

9.0 BALANCE OF FACILITIES

ORP stated that a major area of focus in BOF is in support of DFLAW with the continuing design of the EMF. Currently the EMF is about 50 percent design complete, and the contractor is at a transition point of preparing the procurement package to offer initial vendor bidding. The next step will be an increase in design as feedback is received from vendors. There is some construction in the field with the placement of the mud mat for EMF, and the soldier piles will be put in place to support further excavation for the low point drain that will sit at the minus 40-foot level.

ORP stated that the first step in the startup waterfall will be energizing from the permanent power supply, which comes from the offsite 86 substation to building 87. Building 87 is the primary switchgear building for the WTP. ORP noted that the startup waterfall supports the standard progression of activities and startup in the individual BOF to support the overall WTP site. ORP stated that energization is expected in the June 2016 time frame. ORP noted that there have been a few delays going through the punch list, but pointed out this is the first-time energization. ORP added that the focus is on quality and safety and taking the time to work through any issues, and there is less of a concern about the schedule. There will be a progression of energization from building 87 to building 91, which is the BOF switchgear building, and that will allow permanent power to other BOF in support of the startup efforts.

Ecology inquired about the turn-down efforts in BOF. ORP responded that BOF is built to support the overall WTP, and in order to support a reduced output, the output needs to be reduced for the DFLAW mission. ORP stated that the two key areas to address are the chiller compressor plant, which provides the air and cooling water, and the steam plant, which provides the steam. There are manifold modifications that will be done in the steam plant that will allow for high quality steam to come out of the system through a smaller manifold instead of the one large pipe. ORP stated that construction of the chiller compressor plant is complete, but there are some isolation valves that need to be placed within the facility to properly route for operations of a reduced number of components. An additional rotary screw compressor is being installed in the building, and the procurement has been let and is ongoing.

10.0 ANALYTICAL LABORATORY

ORP stated that the LAB is in place, and there will be very few physical changes to the facility. The major current effort is completion of the test engineer's work station, which will allow support of the instrument communications during the initial startup waterfall in BOF. The test engineer's work station will be a point of control until the LAW Annex is operational. The LAW Annex will be the control room that will be used for DFLAW operations, but the test engineer's station will provide the opportunity to get some of the startup activities started earlier.

ORP stated that walk-downs are being done on systems within the LAB to identify modifications or isolations that may be needed for DFLAW. ORP reported that the procedures are being developed to support the analytical methods development. The analytical methods development is anticipated to start later this year and continue through the next two years.

ATTENDEES:

U.S. DOE Office of River Protection:

R. E. Beach
S. J. Beehler
K. W. Burnett
J. J. Carter
J. A. Diediker
R. L. Evans
T. W. Fletcher
J. F. Grindstaff
S. Harting
P. R. Hernandez
C. J. Kemp
C. F. Keith
D. P. Knight
D. M. MacDonald
A. C. McCartney
S. H. Pfaff
J. L. Sands
D. M. Stewart
G. D. Trenchard
B. R. Trimberger
R. J. Valle
W. R. Wrzesinski
J. D. Young

Washington State Department of Ecology:

N. Chandron
S. L. Dahl
J. D. McDonald
J. Price
J. Richardson
S. Schleif
A. Smith
C. Whalen

U.S. Environmental Protection Agency:

D. A. Faulk

Mission Support Alliance:

S. M. Braswell
R. E. Piippo
M. J. Turner


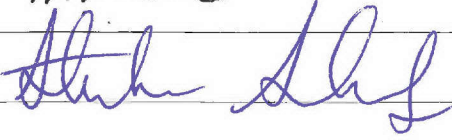
Other:

S. Cimon (Oregon DOE)
J. T. Hamilton (WRPS)
K. Knox (Court Reporter)
D. Parker (WRPS)

19 May 2016
~~21 April 2016~~
 ORP TPA CD Monthly Meeting

PRINT NAME	SIGN NAME	ORG
Abdul, Wahed		ORP
Alzheimer, Jim		ECY
Barnes, Mike		ECY
Beach, Ryan	Ryan & Beach	ORP
Biyani, Rabindra		ECY
Braswell, Sharon	Sharon Braswell	MSA
Bruggeman, Jeff		ORP
Burnett, Kaylin W	Kaylin Burnett	ORP
Carter, Justin	Justin Carter	ORP/WED
Chandran, Nitya	Nitya & Cheryl	ECY
Cimon, Shelly Shelly	Shelly Cimon	OR State
Curn, Barry		BNI
Diediker, Janet	Janet Diediker	ORP
Evans, Rana	Rana Evans	ORP
Fletcher, Thomas	Tom Fletcher	ORP
Gao, Tracy		ECY
Grindstaff, Joanne	Joanne Grindstaff	ORP/WTP
Hamilton, James	James Hamilton	WRPS
Harp, Ben		ORP
Hernandez, Paul	Paul Hernandez	ORP
Higgins, Kathleen		ORP
Huffman, Lori		ORP
Johnson, Jeremy		ORP
Joyner, Jessica		WRPS

19 May 2016
~~21 April 2016~~
 ORP TPA CD Monthly Meeting

PRINT NAME	SIGN NAME	ORG
Kemp, Christopher	CT 148	ORP
Knight, Dan		ORP
Knox, Kathy	Kathy Knox	Court Reporter
Lobos, Rod		EPA
Lowe, Steven		ECY
Lynch, James		ORP
Lyon, Jeffery		ECY
MacDonald, Dawn	Dawn MacDonald	ORP
Martell, John		DOH
Mathey, Jared		ECY
McDonald, Dan	Dan McDonald	ECY
McNeel, Kliss R		WRPS
Menard, Nina		ECY
Nichols, Stacy		ECY
Noonan, Carolyn		MSA
Pfaff, Stephen H	Stephen H Pfaff	ORP
Piippo, Robert E	ROB PIIPPO	MSA
Price, John	John Price	ECY
Rambo, Jeffrey		ORP
Richardson, John	John Richardson	ECY
Sands, Jennifer	Attended	ORP
Schleif, Stephanie		ECY
Schmidt, John		DOH
Shuen, Jian-Shun		ORP

19 May 2016
~~21 April 2016~~

ORP TPA CD Monthly Meeting

PRINT NAME	SIGN NAME	ORG
Skorska, Maria		ECY
Smith, Alex	Alex Smith	ECY
Stafford, Harold		ORP
Stewart, Dustin	Dustin Stewart	ORP
Trenchard, Glyn	Glyn Trenchard	ORP
Trimberger, Bryan	Bryan Trimberger	ORP
Turner, Michael	Michael Turner	MSA
Utle, Randell		DOH
Valle, Richard	Richard Valle	ORP
Varljen, robin		ECY
Walmsley, Mign		ECY
Wang, Oliver S		ECY
Whalen, Cheryl	Cheryl Whalen	ECY
Wold, Kristi		ECY
Wrzesinski, Wendell		ORP
Young, Jason	Jason Young	ORP
Faulk, Dennis	Dennis Faulk	SPA
PARKER, DAN	Dan Parker	WRPS
Keith, Colleen	Colleen Keith	GSSC for ORP
Harting, Samantha	Samantha Harting	ORP
Dahl, Suzanne	Suzanne Dahl	Ecology
McLartney, Anne	Anne McLartney	ORP
BEECHER, STEVE	Steve Beecher	ORP

May 19, 2016
Office of River Protection Quarterly Milestone Review Meeting
Ecology Offices, Conference Room 3A/B
Chairperson: Tom Fletcher

Topic	Leads	Time
Administrative Items / Milestone Status / ORP Key Documents List	Bryan Trimberger / Dan McDonald / Jeff Lyon	8:30
System Plan	Kaylin Burnett / Jeff Lyon / Dan McDonald	8:35
Acquisition of New Facilities	Janet Diediker / Jeff Lyon / Dan McDonald	8:40
Supplemental Treatment and Part B Permit Applications	Steve Pfaff / Jeff Lyon / Dan McDonald	8:45
242-A Evaporator Status	Paul Hernandez / Jeff Lyon	8:50
Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment (ETF)	Richard Valle / Stephanie Schleif	8:55
Tank System Update	Dusty Stewart / Jeff Lyon	9:00
Error! Reference source not found.	Dusty Stewart / Jim Alzheimer	9:05
In Tank Characterization and Summary	Dusty Stewart / Michael Barnes	9:10
Tank Operations Contract (TOC) Overview	ORP Project Leads / Jeff Lyon	9:15
Single-Shell Tank Closure Program	Ryan Beach / Jeff Lyon	9:20
Single-Shell Retrieval Program (TPA and CD), including: <ul style="list-style-type: none"> Tank Waste Retrieval Work Plan Status Tank in Appendix H Tanks with Individual Milestones 	Chris Kemp / Jeff Lyon	9:25
Waste Treatment Plant (WTP) Overall TPA and CD Summary and Milestones Status	Joni Grindstaff / Dan McDonald	9:30
WTP Pretreatment (PT) Facility	Dan Knight / Dan McDonald	9:35
WTP High-Level Waste (HLW) Facility	Wahed Abdul / Dan McDonald	9:40
WTP Low-Activity Waste (LAW) Facility	Jeff Bruggeman/ Dan McDonald	9:45
WTP Analytical Laboratory (LAB)	Jason Young/ Dan McDonald	9:50
WTP Balance of Facilities (BOF)		

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2016

Agreements:

1. Per an Ecology standing request (4/21/2016), ORP agrees to include any written directives given by DOE to the contractors for work required by the CD in future quarterly CD Reports (see CD Section IV-C-1-e).
2. The ORP and Ecology PMs have developed, signed, and entered an outline for the CD Tank Completion Certification into the TPA Administrative Record. Senior management will continue to be briefed if any follow-on actions arise.

Issues:

1. Ecology has a concern with WTP data being reported exclusively in the CD Monthly Summary Report as the current CD reporting process does not allow Ecology early review time of the CD Monthly Summary Report. ORP and Ecology have raised this concern for discussion at the senior management levels.
2. Ecology disagrees with ORP's letter 15-WSC-0027 and the System Plan.

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2016

Tank Farms Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
1	TF-15-06-01	06/15/15	Ecology would like to be included in future Low-Activity Waste Pretreatment System (LAWPS) work discussions and meetings.	Closed		Steve Pfaff/ Janet Diediker	4/21/16
2	TF-15-10-02	10/15/15	Ecology requests ORP provide information regarding plans and concepts for LERF/ETF to be ready to accommodate Direct Feed Low Activity Waste (DFLAW).	Open		Wendell Wrzesinski	
3	TF-15-10-03	10-15-15	Ecology requests ORP provide information regarding the LERF basin covers, including the target and plan to reduce inventory in the basins.	Open		Richard Valle	
4	TF-16-01-01	1-21-16	Ecology requests DOE provide current LAWPS technical design media to Ecology	Open		Steve Pfaff/ Janet Diediker	
5	TF-16-01-02	1-21-16	Ecology would like DFLAW program interface information to include mass & energy balance and process flow information.	Open		Wendell Wrzesinski	
6	TF-16-01-03	1-21-16	Ecology would like more information on the contamination issue for AX-104 Riser 9D	Open		Ryan Beach	

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2016

WTP Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
1	WTP-14-10-01	10/23/14	Ecology requests information on DOE's plans and timeline for the Low Activity Waste (LAW) (replacement) melter assembly building.	Open	An engineering study conducted in 2008 will be provided to Ecology. Additional information on replacements plans will also be provided to Ecology.	Wendell Wrzesinski	
2	WTP-14-10-04	10/23/14	Ecology requests a status update to include a schedule on the 8 technical team issues for High Level Waste (HLW) and Pretreatment (PT).	Open	Completed for HLW.	Dan Knight	
3	WTP-14-10-05	10/23/14	Ecology requests on update on the details of the 2-year work plan for HLW and PT.	Open	Completed for HLW.	Dan Knight	
4	WTP-14-06-02	06/19/14	Ecology requests that DOE provide a presentation on how DOE incorporates, vets, and considers all technical issues (including the Safety Design Strategy).	Open		Joni Grindstaff	
5	WTP-14-04-01	04/22/14	ORP and Ecology have a placeholder action to hold a comprehensive briefing/discussion on the PT efforts.	Open	ORP will follow-up with Ecology to further define and clarify this action so that it can be address and closed.	Joni Grindstaff	
6	WTP-15-01-01	1/22/15	Ecology requests a presentation on standardized high-solids vessel design (SHSVD) to include impacts and optimization in planning area 2, 3, and 4	Open	Impacts will be better understood once the design studies are issued.	Dan Knight	
7	WTP-15-06-01	06/15/15	ORP took an action to provide Ecology a copy of the corrosion simulant basis document.	Open		Dan Knight	

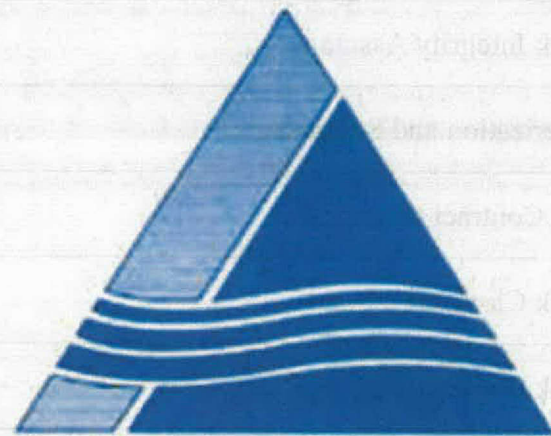
ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2016

WTP Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
8	WTP-16-02-01	2/18/16	Ecology would like to know what design features are left for SHSVD	Open		Dan Knight	

FINAL

Office of River Protection

Tri-Party Agreement Monthly Report May 2016



Tri-Party Agreement

Office of River Protection (ORP)
Tri-Party Agreement (TPA) Milestone Review
Project Earned Value Management System reflects March 2016 information

Page	Topic	Leads
2	Administrative Items/Milestone Status	Bryan Trimberger/Dan McDonald/Jeff Lyon
4	System Plan	Kaylin Burnett/Jeff Lyon/Dan McDonald
6	Acquisition of New Facilities	Janet Diediker/Jeff Lyon/Dan McDonald
7	Supplemental Treatment and Part B Permit Applications	Steve Pfaff/Jeff Lyon/Dan McDonald
9	242-A Evaporator Status	Paul Hernandez/Jeff Lyon
10	Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility	Richard Valle/ Stephanie Schleif
11	Tank System Update	Dusty Stewart /Jeff Lyon
11	Single-Shell Tank Integrity Assurance	Dusty Stewart / Jim Alzheimer
12	In Tank Characterization and Summary	Dusty Stewart/Michael Barnes
14	Tank Operations Contract Overview	ORP TPA Program Managers/Jeff Lyon
24	Single-Shell Tank Closure Program	Ryan Beach/Jeff Lyon
27	Single-Shell Tank Retrieval Program	Chris Kemp/Jeff Lyon
29	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
30	Tank in Appendix H, "Status - Single Shell Waste Retrieval Criteria"	Chris Kemp/Jeff Lyon
30	Tank Retrievals with Individual Milestones	Chris Kemp/Jeff Lyon
CD	Waste Treatment and Immobilization Plant (WTP) Overall TPA Summary and Milestone Status; see the U.S. Department of Energy, Office of River Protection Consent Decree 08-5085-FVS Monthly Report for WTP Facility-specific information	Joni Grindstaff/Dan McDonald

Administrative Items/Milestone Status

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2015				
M-062-45-T01	Comp. Neg's 6-Mo After Last Issuance of System Plan	04/30/2015		In Dispute
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		In Dispute
M-062-45-ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones	04/30/2015		In Dispute
M-045-92	Barrier 3 Design/Monitoring Approval From Ecology	06/30/2015		In Dispute
M-045-82	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		In Dispute
M-045-91E1	Provide SST Farms Dome Deflection Surveys Every Two Years.	09/30/2015	9/21/15	Complete
Fiscal Year 2016				
M-045-92N	Construct Barriers 1 and 2 in 241-SX Farm	10/31/2015		In Dispute
M-062-01AF	Submit Semi-Annual Project Compliance Report	01/31/2016	01/29/2016	Complete
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	03/31/2016		In Dispute
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology	03/31/2016		In Dispute
M-062-31-T01	Comp. Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment	04/30/2016		In Dispute
M-045-92Q	Submit Barrier 4 Design/Monitoring Plan	06/30/2016		In Dispute
M-062-01AG	Submit Semi-Annual Project Compliance Report	07/31/2016		On Schedule
M-045-56L	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2016		On Schedule
Fiscal Year 2017				
M-045-92P	Barrier 3 Construction Complete	10/31/2016		In Dispute
M-062-40E	Select a Minimum of Three Scenario's	10/31/2016		On Schedule
M-045-61A	Submit to Ecology a primary doc. Phase 2 CMS and Rev. O update to the RFI Report for WMA-C	12/31/2016		On Schedule
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA-C	Six months after CMS approval (M-045-61A)		On Schedule
M-045-84	Comp Neg's of HFFACO Interim Milestones for Closure of 2 nd SST WMA	01/31/2017		At Risk

Milestone	Title	Due Date	Completion Date	Status
M-062-01AH	Submit Semi-Annual Project Compliance Report	01/31/2017		On Schedule
M-062-01AI	Submit Semi-Annual Project Compliance Report	07/31/2017		On Schedule
M-045-91E2	Provide SST Farms Dome Deflection Surveys' Every Two Years	09/30/2017		On Schedule

CD-1/-2 = critical decision-1/-2.

CMD = current measuring device.

CMS = current measures study.

CR = change request.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

HFFACO = Hanford Federal Facility Agreement and Consent Order.

RCRA = Resource Conservation and Recovery Act.

RFI = RCRA Facility Investigation.

SST = single-shell tank.

TBD = to be determined.

WTP = Waste Treatment and Immobilization Plant.

WMA = Waste Management Area.

System Plan

Significant Past Accomplishments:

1. On October 24, 2013, Washington State Department of Ecology (Ecology) and U.S. Department of Energy (DOE), Office of River Protection (ORP) signed the Tri-Party Agreement (TPA) Change Control Form M-62-13-02, moving out the due date for this embedded milestone from October 31, 2013 to December 15, 2013, for selection of three, or more, scenarios to be modeled in the ORP-11242, *River Protection Project System Plan*, Rev. 7 (System Plan 7).
2. Ecology defined five scenarios to be analyzed in System Plan 7. Washington River Protection Solutions LLC (WRPS) included a description of each scenario in the *Selected Scenarios for the River Protection Project System Plan*, Rev. 7 document released to ORP on December 4, 2013. See joint ORP and Ecology letter 13-TPD-0070, "Completion of Hanford Federal Facility Agreement and Consent Order Milestone M-062-40C, to select a Minimum of Three Scenarios and Partial Completion of Milestone M-062-40," dated December 12, 2013, for completion and description of M-062-40C scenarios.
3. Detailed assumption review was completed and has been approved by Ecology.
4. On February 11, 2014, ORP transmitted a letter (14-TPD-0003, "Contract No. DE-AC27-08RV14800 – Approval to use Washington State Department of Ecology's Appendix B, "Key Assumptions and Success Criteria" for the ORP-11242, *River Protection Project System Plan*, Rev. 7") to WRPS in response to letter WRPS-1400313, "One System – Washington River Protection Solutions LLC Transmits to the U.S. Department of Energy, Office of River Protection for Approval, Appendix B Key Assumptions and Success Criteria for the River Protection Project System Plan, Revision 7, in Support of Contract Deliverable C.2.3.1 -1, River Protection Project System Plan," to approve the use of Ecology's Appendix B, "Key Assumptions and Success Criteria," for System Plan 7.
5. On February 13, 2014 Ecology presented the five selected scenarios to the Hanford Advisory Board Tank Waste Committee.
6. Ecology, ORP, and WRPS reviewed and provided comments for Sections 1.0 and 2.0 of System Plan 7 during the week of February 17, 2014.
7. Ecology, ORP and WRPS reviewed and provided comments for Section 3.0 of the System Plan 7 during the week of March 21, 2014.
8. Ecology, ORP and WRPS reviewed and provided comments for Appendix C, "Modeling Tools," of the System Plan 7 during the week of April 1, 2014.
9. During the week of April 28, 2014, WRPS and ORP facilitated meetings for Ecology to define detail spending assumptions for Case 5.
10. On July 29, 2014, WRPS case authors presented the results of the five cases to Ecology and ORP.
11. System Plan 7 was reviewed, all comments resolved, and comments incorporated into the document.

12. On October 31, 2014, ORP transmitted System Plan 7 to Ecology.
13. ORP received Ecology's January 14, 2015, transmitted letter 15-NWP-004, "Department of Ecology Review of the *River Protection Project System Plan*, ORP-11242, Revision 7," regarding Ecology's review of System Plan 7.
14. ORP met with Ecology at the Tank Farms TPA and Consent Decree (CD) monthly status meeting on February 25, 2015.
15. ORP transmitted letter 15-WSC-0027, "Washington State Department of Ecology Review of ORP-11242, *River Protection System Plan*, Rev. 7, 15-NWP-004, January 14, 2015," in response to Ecology's letter 15-NWP-004 to Ecology on June 2, 2015. ORP's letter provided clarification and several attachments of additional information requested in Ecology's January 14, 2015, letter.
16. Scenario selection discussions to support M-062-40E started between ORP and Ecology on April 25, 2016.

Significant Planned Actions in the Next Six Months:

- Scenario selection discussions will be conducted to support M-062-40E, Due: October 31, 2016

Issues: None.

Acquisition of New Facilities

M-090-13, Submit Critical Decision-1 for Interim Hanford Storage Project and TPA Change Request for CD-2 to Ecology, Due: March 31, 2016, Status: In dispute. Change control form M-90-15-01 was submitted by ORP to Ecology for approval on December 30, 2015. This dispute has been extended to May 20, 2016.

M-090-00, Acquire/Modify Facilities for Storage of Immobilized High-Level Waste (IHLW), Due: December 31, 2019, Status: On schedule.

M-047-07, Submit CD-1 for Secondary Liquid Waste Treatment and Change Request (CR) for CD-2 to Ecology, Due: March 31, 2016, Status: In dispute. Change control form M-47-15-01 was submitted by ORP to Ecology for approval on December 30, 2015. This dispute has been extended to May 20, 2016.

M-047-00, Complete Work Necessary to Provide Facilities for Management of Secondary Waste from the Waste Treatment and Immobilization Plant (WTP), Due: December 31, 2022, Status: On schedule.

Significant Past Accomplishments: None.

Significant Planned Actions in the Next Six Months: None.

Issues: None.

Supplemental Treatment and Part B Permit Applications

M-062-45-ZZ (designation for M-062-45 item 3), Negotiate a one-time supplemental treatment selection, Due: April 30, 2015, Status: In dispute.

M-062-45-ZZ-A, Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones, Due: April 30, 2015, Status: In dispute.

M-062-31-T01, Complete final design and submit Resource Conservation and Recovery Act Part B permit modification request, Due: April 30, 2016, Status: In dispute.

M-062-32-T01, Start construction of supplemental vitrification treatment facility and/or WTP enhancements, Due: April 30, 2018, Status: In dispute.

M-062-33-T01, Complete construction of supplemental vitrification treatment facility and/or WTP enhancements, Due: April 30, 2021, Status: In dispute.

M-062-45-T01, Every six years, within six months after last revision of the System Plan, negotiate tank waste retrieval sequencing, Due: April 30, 2015, Status: In Dispute.

M-062-45-XX, No later than December 31, 2021, the DOE and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in M-062-45, paragraphs 4 and 5, Due: December 31, 2021, Status: On schedule.

M-062-34-T01, Complete hot commissioning of supplemental vitrification treatment facility and/or WTP enhancements, Due: December 30, 2022, Status: In dispute.

M-062-21, Annually submit data that demonstrates operation of the WTP, Due: February 28, 2023, Status: On schedule.

M-062-00, Complete Pretreatment Processing and Vitrification of High-Level Waste and LAW Tank Wastes, Due: December 31, 2047, Status: On schedule.

Significant Past Accomplishments:

*Per ORP letter 14-TF-0052, "Documentation of U.S. Department of Energy, Office of River Protection and Washington State Department of Ecology Agreement that the Office of River Protection will not Submit A One-Time Hanford Tank Waste Supplemental Treatment Technologies Report," signed by ORP on May 6, 2014, and provided to Ecology on May 7, 2014, ORP documented the ORP/Ecology discussions for the one-time *Hanford Tank Waste Supplemental Treatment Technologies Report* and that ORP does not intend to submit this report. ORP received Ecology's response letter, 14-NWP-110, "Acknowledgement that the U.S. Department of Energy, Office of River Protection Will Not Submit a One-Time Supplemental Treatment Technologies Report," on May 29, 2014. ORP letter 14-TF-0088, "Hanford Federal Facilities Agreement and Consent Order Class II Change Request for Deletion

of Tri-Party Agreement Milestone M-062-40ZZ, *One-Time Hanford Tank Waste Supplemental Treatment Technologies Report*,” dated and delivered to Ecology on July 31, 2014, submitted a signed TPA change package to delete the requirement of the *One-Time Hanford Tank Waste Supplemental Treatment Technologies Report* from TPA Milestone M-062-40. Ecology signed TPA Change Package M-62-14-01 deleting M-062-40ZZ on August 12, 2014.

Significant Planned Actions in the Next Six Months: None.

Issues:

On January 30, 2015, ORP provided Ecology Change Control Form M-62-14-02, which proposed adding language under TPA Milestone M-062-45 to defer negotiations required under M-062-45. Ecology did not respond with the 14-day review period that ended February 13, 2015 which is deemed disapproval in accordance with the TPA. In letter 15-TF-0014, “Initiation of Dispute Resolution Regarding Disapproval of Hanford Federal Facility Agreement and Consent Order Change Control Form M-62-14-02,” dated February 20, 2015, ORP initiated a dispute resolution. Ecology provided a justification for their disapproval on March 12, 2015 via letter 15-NWP-036, “Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Package, Change Number M-62-14-02, dated 01/30/2015.” Ecology and ORP signed an extension of the dispute resolution period at the TPA project manager level until May 20, 2016.

242-A Evaporator Status

(previously reported under Milestone M-48, which has been closed out)

The 242-A Evaporator campaign strategy for fiscal year (FY) 2015 through fourth quarter of FY 2016 depicted in the following table:

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY 2015	EC-01	AP-103 AP-104	AP-107	Completed June 21, 2015. WVR = 381 kgal
FY 2015	EC-02	AZ-102	AP-103	Completed July 21, 2015. WVR = 384 kgal
FY 2015	EC-03	AZ-102	AP-103	Completed September 25, 2015. WVR = 375 kgal
FY 2016	EC-04	AP-104	AP-103	Completed April 15, 2016. WVR = 258 kgal
FY 2016	EC-05	AP-104	AP-104	Completed April 21, 2016. WVR = 46 kgal
FY 2016	EC-06	AY-101	AP-104	Estimated to begin fourth quarter FY 2016.

FY = fiscal year
 kgal = thousand gallons
 WVR = waste volume reduction

Significant Planned Actions in the Next Six Months:

- Future campaign and outage scheduling
- Electrical preventative maintenance activities in 241-AW and 242-A
- Control room upgrades at 242-A Evaporator
- Replacement of the P-B-2 pump variable frequency drive

Issues: None.

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

Status:

The Liquid Effluent Retention Facility (LERF) liquid levels, inventory, and received waste is shown in the table below.

Note: Volumes in this table are estimated. Tanker shipment volumes are estimated by multiplying the number of shipments by the capacity of the tanker being used.

	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 (Basin 44)
Volume (as of 04/30/16)	~5.35 Mgal	~7.20 Mgal	~6.76 Mgal
AZ-301 Tanker Shipments	-	-	-
MWBT-31 and 34 Leachate	-	-	~49,000 gal
Perched Water Tanker Shipments	-	-	-
ERDF Leachate Transfers	-	47,000 gal	-
ERDF Leachate Tanker Shipments			
Other (325 Building Totes)	-		~1700 gal
242-A Campaigns (EC-04 & 05)	~ 416,000 gal		

ERDF = Environmental Restoration Disposal Facility.

Gal = gallon.

Mgal = million gallons.

MWBT = mixed waste burial trench.

Significant Planned Actions in the Next Six Months:

- Staff training, component and system testing, and readiness activities for Effluent Treatment Facility (ETF) are ongoing and expected to be completed in third quarter of FY 2016.
- Berm special protective coating of specific areas at ETF and LERF are ongoing and expected to be completed in third quarter of FY 2016.
- Hanford Dangerous Waste Permit 8C, Operation Unit Group -3, class 1 prime modifications package submittal in third quarter.
- Processing waste from LERF through ETF scheduled for third and fourth quarters of FY 2016.

Issues: None.

Tank System Update

Significant Planned Actions in FY 2016:

~~Strikethrough~~ means completed to date

Double Shell Tank (DST) Integrity

- Enhanced annulus video inspection:
 - ~~241-AN-101~~ (complete)
 - 241-AN-103
 - 241-AN-104
 - 241-AN-105
 - 241-AN-106
 - ~~241-AW-103~~ (complete)
 - ~~241-AW-106~~ (complete)
 - 241-SY-101
 - 241-SY-102
 - 241-SY-103
- Ultrasonic testing (UT) inspections (two risers for primary wall/welds, one riser for secondary floor):
 - 241-AN-105 (field work complete, in close-out)
 - 241-AW-103 (preparations underway)
- Continuing bi-weekly inspections of AY-102 waste accumulation site
- Continuing bi-monthly comprehensive inspection of AY-102 annulus
- Revise and update RPP-7574, *Double-Shell Tank Integrity Project Plan*
- Released the DST independent qualified registered professional engineer (IQRPE) integrity assessment report (RPP-RPT-58441) per WAC 173-303-640(2), "Tank systems".

Single Shell Tanks (SST) Integrity

- In-tank video inspections:
 - ~~241-T-107~~ (complete)
 - ~~241-T-110~~ (complete)
 - 241-TX-103
 - 241-TX-111
 - 241-TX-113
 - 241-TX-116
 - ~~241-B-101~~ (complete)
 - ~~241-B-201~~ (complete)
 - 241-BY-105
 - 241-U-102
 - 241-U-105
 - 241-U-107. (no free riser, replaced with 241-S-105)
- Intrusions mitigation (M-045-56):

- Complete 241-T-111. Evaporation of 241-T-111 continues, a report will be issued when evaporation is considered complete.
- Work is initiated on subsequent tank 241-T-112

Single-Shell Tank Integrity Assurance

M-045-91I, Provide to Ecology an Independent, Qualified, Registered Professional Engineer (IQRPE) certification of single-shell tanks (SST) structural integrity for the remainder of the mission, or for such time as the IQRPE believes he/she can reasonably certify, Due: September 30, 2018, Status: On schedule.

Significant Past Accomplishments: None

Significant Planned Actions in the Next Six Months:

- Continue planning for the SST integrity assessment by an IQRPE (M-045-91I).

Issues: None.

In Tank Characterization and Summary

For the period from April 1 through April 30, 2016:

Accomplishments:

- Completed RPP-RPT-58236, *Derivation of Best-Basis Inventory for Tank 241-S-111 as of April 1, 2016*, Rev 1
- Completed RPP-RPT-52180, *Derivation of Best-Basis Inventory for Tank 241-SX-106 as of April 1, 2016*, Rev 2.
- Completed RPP-RPT-43992, *Derivation of Best-Basis Inventory for Tank 241-AN-106 as of April 1, 2016*, Rev 16.
- Completed RPP-PLAN-60724, *Tank 241-AP-102 Grab Sampling and Analysis Plan during 241-AY-102 Retrieval*, Rev 0.
- Completed RPP-PLAN-60361, *Tank 241-AP-107 Grab Sampling and Analysis Plan in FY2016*, Rev 0.
- RPP-RPT-59267, *Final Report for Tank 241-C-111 Liquid Samples in Support of Hard Heel Retrieval for Fiscal Year 2016*, Rev 0, was released.
- RPP-RPT-59294, *Final Report for 241-AN-101 Floating Organic Check Samples in Support of C-111 Retrieval in Fiscal Year 2016*, Rev 0, was released.

- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending February 29, 2016*, Rev 338.
- Completed evaporator slurry grab sampling for the combined EC-04/EC-05 Evaporator campaign on April 7, 2016. Two samples were received at the laboratory.
- Completed 241-AP-102 grab sampling April 12, 2016. Nine samples were received at the laboratory.
- Completed 241-AN-101 grab sampling April 25, 2016. Nine samples were received at the laboratory.

Planned Action within the Next Six Months:**Tank sampling:**

- Tank 241-AP-107 core sampling is planned to begin May 2016.
- Tank 241-AP-107 grab sampling is planned to begin May 2016
- Tank 241-C-111 closure grab sampling is planned to begin May 2016.
- Tank 241-AW-103 grab sampling is planned for August 2016.

Best-Basis Inventory (BBI) updates:

BBI updates for the following tanks were completed in April 2016:

- 241-AN-106
- 241-S-111
- 241-SX-106

BBI updates for the following tanks currently are planned to be completed in May 2016:

- 241-A-104
- 241-AP-107
- 241-C-111
- 241-A-106
- 241-AY-102
- 241-AN-101
- 241-AZ-102

Data Quality Objectives (DQO):

- RPP-8532, *Double-Shell Tanks Chemistry Control Data Quality Objectives*, Rev 15, is in-process to identify additional analyses for corrosion mitigation and to simplify quality control parameters is planned to be released in May 2016.

Issues: None

Tank Operations Contract Overview

Project Performance

The earned value performance reporting reflects the format, work breakdown structure reporting levels, and variance thresholds as agreed to with the Tank Operations Contractor (TOC) for monthly performance reporting. The earned value analysis is not intended to be a measurement of performance against existing TPA milestones.

March-16										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	57,499	58,407	59,030	908	(623)	1.02	0.99			
FYTD	258,219	249,370	261,087	(8,848)	(11,717)	0.97	0.96	570,584		
CTD	3,109,354	3,080,623	3,085,766	(28,731)	(5,142)	0.99	1.00	3,448,365	3,464,612	(16,247)

ACWP = actual cost of work performed.
 BAC = budget at completion.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CM = current month
 CPI = cost performance index.
 CTD = contract to date

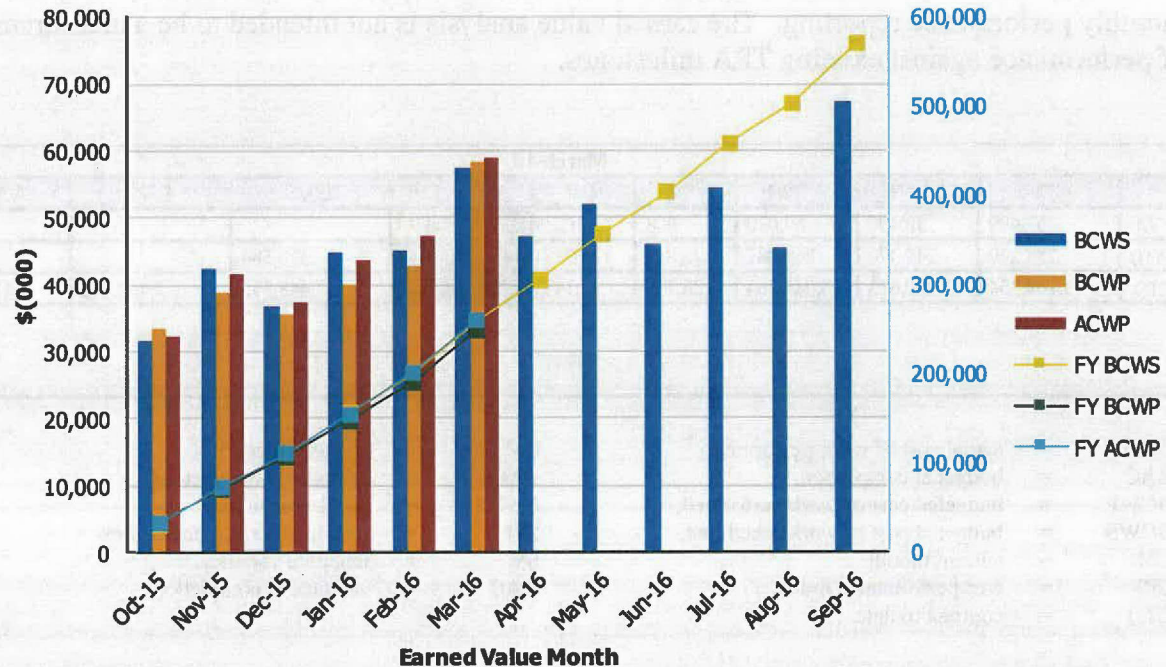
CV = cost variance.
 EAC = estimate at completion.
 FYTD = fiscal year to date
 SPI = schedule performance index.
 SV = schedule variance.
 VAC = variance at completion.

Earned Value Data: Fiscal Year 2016

March-16

Tank Farms ORP-0014

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$31,768	\$33,377	\$32,188	1.05	1.04	\$31,768	\$33,377	\$32,188	1.05	1.04
Nov 2015	\$42,365	\$38,998	\$41,461	0.92	0.94	\$74,133	\$72,376	\$73,649	0.98	0.98
Dec 2015	\$36,744	\$35,614	\$37,416	0.97	0.95	\$110,877	\$107,990	\$111,065	0.97	0.97
Jan 2016	\$44,800	\$40,183	\$43,604	0.90	0.92	\$155,677	\$148,173	\$154,669	0.95	0.96
Feb 2016	\$45,043	\$42,790	\$47,389	0.95	0.90	\$200,720	\$190,963	\$202,058	0.95	0.95
Mar 2016	\$57,499	\$58,407	\$59,030	1.02	0.99	\$258,219	\$249,370	\$261,088	0.97	0.96
Apr 2016	\$47,117					\$305,336				
May 2016	\$52,003					\$357,339				
Jun 2016	\$45,922					\$403,261				
Jul 2016	\$54,492					\$457,753				
Aug 2016	\$45,406					\$503,159				
Sep 2016	\$67,425					\$570,584				
CTD	\$3,109,354	\$3,080,623	\$3,085,766	0.99	1.00					

ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

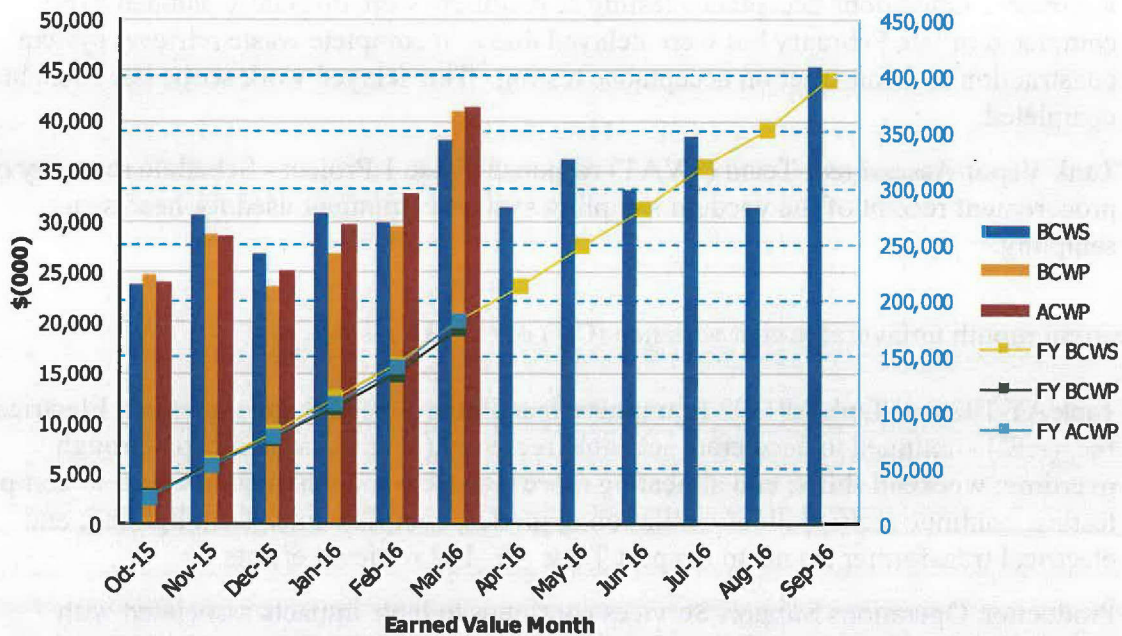
CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Earned Value Data: Fiscal Year 2016

March-16

Tank Farms ORP-0014
Base Operations 5.01

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$23,768	\$24,839	\$24,025	1.05	1.03	\$23,768	\$24,839	\$24,025	1.05	1.03
Nov 2015	\$30,658	\$28,752	\$28,562	0.94	1.01	\$54,426	\$53,592	\$52,587	0.98	1.02
Dec 2015	\$26,911	\$23,637	\$25,173	0.88	0.94	\$81,336	\$77,229	\$77,760	0.95	0.99
Jan 2016	\$30,829	\$26,913	\$29,740	0.87	0.90	\$112,165	\$104,142	\$107,500	0.93	0.97
Feb 2016	\$29,963	\$29,524	\$32,689	0.99	0.90	\$142,128	\$133,666	\$140,189	0.94	0.95
Mar 2016	\$38,167	\$40,891	\$41,434	1.07	0.99	\$180,295	\$174,557	\$181,623	0.97	0.96
Apr 2016	\$31,455					\$211,750				
May 2016	\$36,155					\$247,905				
Jun 2016	\$33,109					\$281,014				
Jul 2016	\$38,524					\$319,537				
Aug 2016	\$31,425					\$350,962				
Sep 2016	\$45,389					\$396,351				
CTD	\$2,072,179	\$2,056,770	\$2,055,452	0.99	1.00					

ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Base Operations and Tank Farm Projects

The current month favorable schedule variance (SV) of \$2,724K is due to:

- AY-102 Washington River Protection Solutions LLC (WRPS) Readiness Support Schedule Recovery: Operations acceptance testing & readiness were originally planned to be completed in late February but were delayed due to incomplete waste retrieval system construction and construction acceptance testing. The delayed work scope has since been completed.
- Tank Vapor Assessment Team (TVAT) response Phase 1 Project - Schedule recovery on procurement receipt of the vacuum sampling system equipment used for head space sampling.

The current month unfavorable cost variance (CV) of (\$543K) is due to

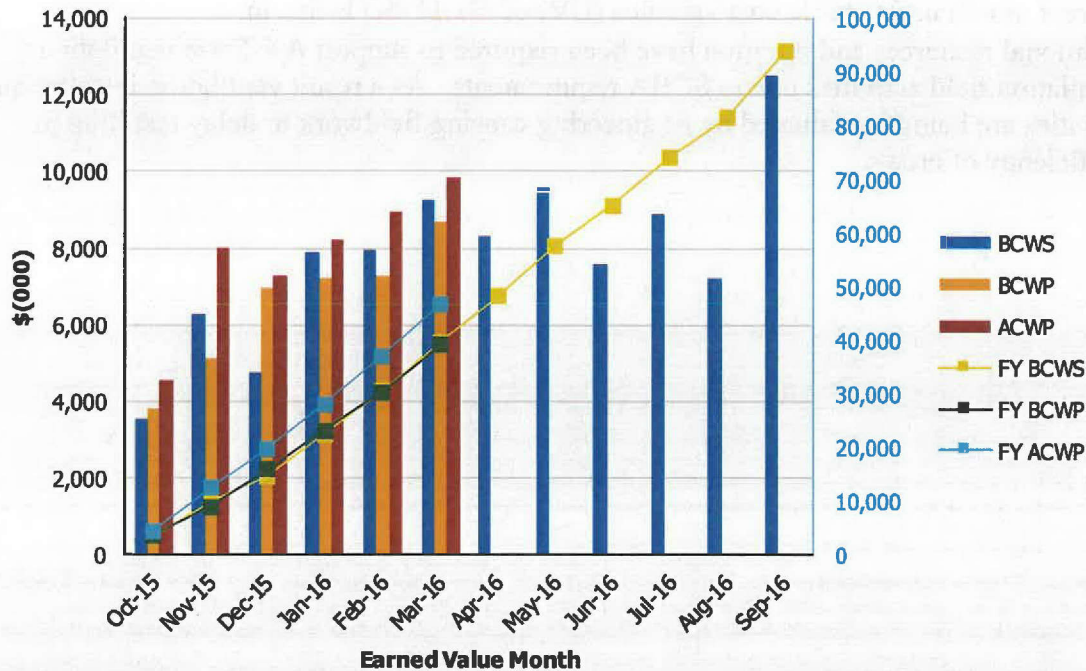
- Tank AY-102 and Tank AP-102 Equipment Installation: WRPS and American Electrical Inc. (AEI) continued to accelerate schedule recovery (at an increased cost) through overtime; weekend shifts; and allocating more resources to construction crews to complete testing, continue recirculation/ventilation upgrades, complete inter-farm lighting; and electrical transformer tie-ins to support Tank AY-102 retrieval efforts.
- Production Operations Support Services continues to have impacts associated with additional labor and subcontracts to support the mask issue stations.

Earned Value Data: Fiscal Year 2016

March-16

Tank Farms ORP-0014
Retrieve and Close SST's 5.02

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$3,557	\$3,814	\$4,560	1.07	0.84	\$3,557	\$3,814	\$4,560	1.07	0.84
Nov 2015	\$6,282	\$5,131	\$8,006	0.82	0.64	\$9,839	\$8,946	\$12,566	0.91	0.71
Dec 2015	\$4,769	\$6,970	\$7,255	1.46	0.96	\$14,608	\$15,915	\$19,821	1.09	0.80
Jan 2016	\$7,914	\$7,214	\$8,233	0.91	0.88	\$22,522	\$23,130	\$28,053	1.03	0.82
Feb 2016	\$7,948	\$7,288	\$8,959	0.92	0.81	\$30,470	\$30,417	\$37,012	1.00	0.82
Mar 2016	\$9,249	\$8,693	\$9,857	0.94	0.88	\$39,719	\$39,111	\$46,869	0.98	0.83
Apr 2016	\$8,312					\$48,031				
May 2016	\$9,597					\$57,628				
Jun 2016	\$7,584					\$65,212				
Jul 2016	\$8,923					\$74,135				
Aug 2016	\$7,228					\$81,363				
Sep 2016	\$12,499					\$93,862				
CTD	\$632,197	\$624,338	\$656,842	0.99	0.95					

ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Retrieve and Close Single Shell Tanks

The current month unfavorable schedule variance (SV) of **(\$556K)** is due to:

- Multiple work stoppages related to self-contained breathing apparatus (SCBA) technical challenges limited work in single-shell tank farms (C-Farm & A/AX Farm) during March.

The current month unfavorable cost variance (CV) of **(\$1,159K)** is due to:

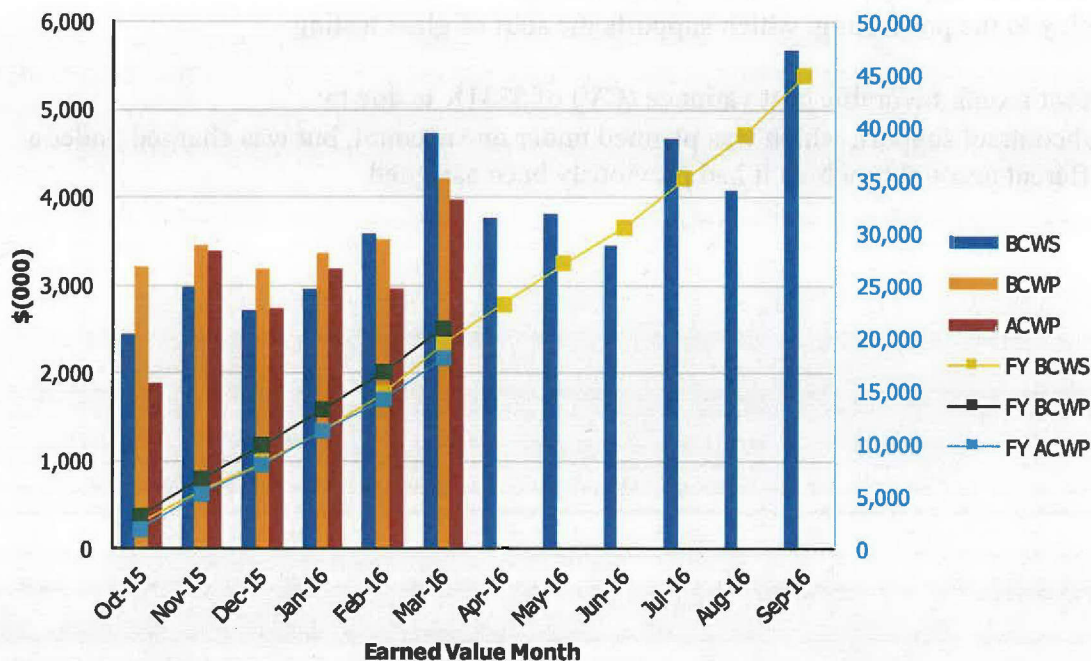
- Additional resources and duration have been required to support AX-Farm ventilation installation field activities due to SCBA requirements. As a result ventilation installation activities are being reevaluated by Engineering causing fieldwork to delay resulting in inefficiency of crews.

Earned Value Data: Fiscal Year 2016

March-16

Tank Farms ORP-0014
Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure 5.03

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$2,434	\$3,210	\$1,876	1.32	1.71	\$2,434	\$3,210	\$1,876	1.32	1.71
Nov 2015	\$2,987	\$3,446	\$3,379	1.15	1.02	\$5,421	\$6,656	\$5,255	1.23	1.27
Dec 2015	\$2,714	\$3,193	\$2,743	1.18	1.16	\$8,134	\$9,849	\$7,998	1.21	1.23
Jan 2016	\$2,966	\$3,366	\$3,180	1.13	1.06	\$11,101	\$13,215	\$11,178	1.19	1.18
Feb 2016	\$3,583	\$3,518	\$2,966	0.98	1.19	\$14,683	\$16,733	\$14,144	1.14	1.18
Mar 2016	\$4,740	\$4,210	\$3,979	0.89	1.06	\$19,424	\$20,943	\$18,124	1.08	1.16
Apr 2016	\$3,777					\$23,200				
May 2016	\$3,812					\$27,012				
Jun 2016	\$3,456					\$30,467				
Jul 2016	\$4,668					\$35,136				
Aug 2016	\$4,073					\$39,209				
Sep 2016	\$5,677					\$44,885				
CTD	\$348,096	\$347,219	\$323,206	1.00	1.07					

ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure

The current month unfavorable schedule variance (SV) of **(\$530K)** is due to:

- Issuance of the plan for testing activities has been delay by 4 weeks due to Pacific Northwest National Laboratory resource limitations and multiple iterations of the draft. This work supports waste sample preparations.
- Delay to the pre-testing, which supports the start of glass testing.

The current month favorable cost variance (CV) of \$231K is due to:

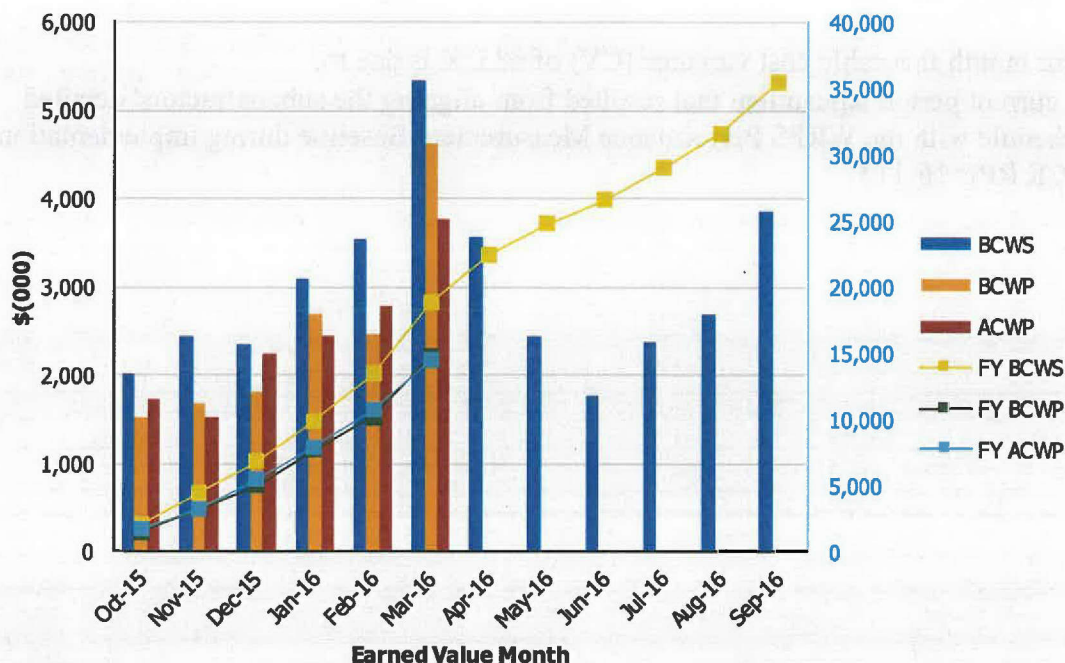
- Subcontract support, which was planned under one account, but was charged under a different account to which it had previously been assigned.

Earned Value Data: Fiscal Year 2016

March-16

Tank Farms ORP-0014
Treat Waste 5.5

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$2,008	\$1,513	\$1,735	0.75	0.87	\$2,008	\$1,513	\$1,735	0.75	0.87
Nov 2015	\$2,439	\$1,669	\$1,517	0.68	1.10	\$4,447	\$3,182	\$3,252	0.72	0.98
Dec 2015	\$2,351	\$1,814	\$2,245	0.77	0.81	\$6,798	\$4,996	\$5,497	0.73	0.91
Jan 2016	\$3,090	\$2,691	\$2,451	0.87	1.10	\$9,888	\$7,687	\$7,948	0.78	0.97
Feb 2016	\$3,550	\$2,460	\$2,775	0.69	0.89	\$13,438	\$10,147	\$10,723	0.76	0.95
Mar 2016	\$5,343	\$4,613	\$3,760	0.86	1.23	\$18,781	\$14,760	\$14,482	0.79	1.02
Apr 2016	\$3,573					\$22,354				
May 2016	\$2,440					\$24,794				
Jun 2016	\$1,773					\$26,568				
Jul 2016	\$2,377					\$28,945				
Aug 2016	\$2,681					\$31,626				
Sep 2016	\$3,860					\$35,486				
CTD	\$36,773	\$32,186	\$31,104	0.88	1.03					

ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Treat Waste

The current month unfavorable schedule variance (SV) of **(\$730K)** is due to:

- A current period adjustment that resulted from aligning the subcontractors' detailed schedule with the WRPS Performance Measurement Baseline during implementation of BCR-RPP-16-113.

The current month favorable cost variance (CV) of \$853K is due to:

- A current period adjustment that resulted from aligning the subcontractors' detailed schedule with the WRPS Performance Measurement Baseline during implementation of BCR RPP-16-113.

Single-Shell Tank Closure Program

M-045-00, Complete closure of all SST farms, Due: January 31, 2043, Status: On schedule.

M-045-56L, Complete Implementation of Agreed to Interim Measures, Due: July 28, 2016, Status: On Schedule. An annual meeting is held between ORP and Ecology to discuss the prior FY accomplishments and the next FY proposed interim measures. The last annual meeting was held July 15, 2015, and these meeting minutes were placed in the Administrative Record in this location: <http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0080444H>

M-045-59, Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST Waste Management Areas (WMA) (pending the Corrective Measures Study report, Milestone M-45-58, and implementation of other interim corrective measures), Due: To be determined, Status: On schedule.

M-045-61A, Submit to Ecology for review and approval as an Agreement primary document, document review process, a Phase 2 Corrective Measures Study, and Revision 0 update to the RFI Report for WMA-C), Due: December 31, 2016, Status: On Schedule. The RPP-RPT-58339, *Phase 2 RCRA Facility Investigation Report* Draft A for Waste Management Area C (WMA-C), was transmitted to Ecology on December 23, 2014, via letter 14-TF-0131. "The U.S. Department of Energy, Office of River Protection Submittal of the Draft Resource Conservation and Recovery Act Facility Investigation Report for Waste Management Area C in Completion of Milestone M-045-61." This milestone was created by *Hanford Federal Facility Agreement and Consent Order* (HFFACO) change package M-045-14-03, signed October 1, 2014.

M-045-62, Submit to Ecology for review and approval as an agreement primary document a Phase 2 Corrective Measures Study Implementation Plan for WMA-C, Due: Six months after the approval of the corrective measures study (CMS) submitted under milestone M-045-61A. Status: On schedule. TPA change control form M-045-15-02 approved on April 14, 2015.

M-045-82, Submit complete permit mod requests for Tiers 1, 2, and 3 of the SST, Due: September 30, 2015, Status: In dispute. Please see issues.

M-045-83, Complete the closure of WMA-C, Due: June 30, 2019, Status: To be missed. Please see issues.

M-045-84, Complete negotiations of TPA interim milestones for closure of second WMA, Due: January 31, 2017, Status: At risk.

M-045-85, Complete negotiations of TPA interim milestones for closure of remaining WMAs, Due: January 31, 2022, Status: On schedule.

M-045-92 (N, O, P, Q, R) Complete Installation of Four (4) Additional Interim Barriers, Due: October 31, 2017, Status: In dispute. Please see issues.

Significant Past Accomplishments: None.

Significant Planned Activities in the Next Six Months:

- Continue data collection for T Farm and TY Farm interim surface barrier monitoring and develop the annual interim barrier monitoring report for FY 2015.
- Complete TPA/Resource Conservation and Recovery Act (RCRA) Tier 2 and Tier 3 Closure Plans
- Finalize/Issue Integrated Disposal Facility Performance Assessment (PA) summary analysis.
- Complete the waste management area (WMA) C Appendix I PA

Issues:

- **M-045-82, Submit complete permit mod requests for Tiers 1, 2, and 3 of the SST**
 - Change Control Form M-045-15-03 was submitted by ORP via letter 15-TF-0065, "The U.S. Department of Energy, Office of River Protection Transmittal of Hanford Federal Facility Agreement and Consent Order Change Control Form M-045-15-03 to Modify Milestone M-045-82 for Approval," to Ecology for approval on June 30, 2015.
 - Ecology disapproved M-045-15-03 via letter 15-NWP-128, "Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Control Form, Change Number M-045-15-03, Dated June 25, 2015," on July 14, 2015.
 - ORP initiated dispute resolution via letter 15-TF-0069, "Initiation of Dispute Resolution Regarding Disapproval of Hanford Federal Facility Agreement and Consent Order Change Control Form M-045-15-03," on July 16, 2015.
 - ORP submitted a closure schedule to Ecology on January 13, 2016.
 - This dispute has been extended to May 28, 2016 via letter 16-TF-0035. "Extension at the Project Manager Level for the Hanford Federal Facility Agreement and Consent Order Dispute Regarding Disapproval of Change Control Form M-045-15-03."
- **M-045-92 (N, O, P, Q, R), Complete Installation of Four Additional Interim Barriers**
 - (N) Construct SX interim surface barriers (ISB) 1 and 2 by October 31, 2015
 - (O) Design ISB 3 by June 30, 2015
 - (P) Construct ISB 3 by October 31, 2016
 - (Q) Design ISB 4 by June 30, 2016
 - (R) Construct ISB 4 by October 31, 2017
 - Change control form M-045-15-01 was submitted by ORP via letter 15-TF-0027, "Transmittal for Approval of the Hanford Federal Facility Agreement and Consent

Order Change Control Form M-045-15-01 to Modify Milestone M-045-92 Due Dates,” to Ecology for approval on March 31, 2015.

- Ecology disapproved M-045-15-01 via letter 15-NWP-075, “Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Control Form, Change Number M-045-15-01, dated 03/26/15,” on April 17, 2015.
- ORP initiated dispute resolution via letter 15-TF-0042, “Initiation of Dispute Resolution Regarding Disapproval of Hanford Federal Facility Agreement and Consent Order Change Control Form M-045-15-01,” on April 20, 2015.
- ORP elevated this matter to the Interagency Management Integration Team (IAMIT) for resolution via submission of a statement of dispute on February 16, 2016 (16-TF-0016, “Statement of Dispute Regarding Disapproval of Hanford Federal Facility Agreement and Consent Order Change Control Form M-045-15-01”).
- ORP and Ecology have extended the deadline for resolution of the M-045-15-01 dispute at the IAMIT level the next regularly-scheduled IAMIT meeting (March 17, 2016) following the entry of a final order modifying the Consent Decree in State of Washington vs United States. Department of Energy, No. 08-5085-RMP.
- In accordance with Decision/Determination/Action Assignment Number 2016-002: The IAMIT has agreed that the dispute on change control form M-045-15-01 is extended at the IAMIT level until May 20, 2016.

Single-Shell Tank Retrieval Program

M-045-70, Complete waste retrieval from all remaining SSTs, Due: December 31, 2040, Status: On schedule.

M-045-86, Submit retrieval data report (RDR) to Ecology for 19 tanks retrieved, Due: To be determined (12 months after retrieval certification), Status: On schedule.

- M-045-86I: RDR for C-101 was due September 24, 2015, completed on September 24, 2015 with letter 15-TF-0099, "The U.S. Department of Energy, Office of River Protection Submits the Retrieval Data Report for Tank 241-C-101."
- M-045-86C: RDR for C-104 was due March 21, 2014, completed on February 18, 2014 with letter 14-TF-0013, "The U.S. Department of Energy, Office of River Protection Submits the Retrieval Data Report for Tank 241-C-104."
- M-045-86E: RDR for C-107 was due July 28, 2015, completed on September 15, 2015 with letter 15-TF-0086, "The U.S. Department of Energy, Office of River Protection Submits the Retrieval Data Report for Tank 241-C-107."
- M-045-86F: RDR for C-108 was due May 1, 2014, completed on November 27, 2013 with letter 13-TF-0120, "Submittal of Retrieval Data Report for Single-Shell Tank 241-C-108, RPP-RPT-55896, Revision 1."
- M-045-86G: RDR for C-109 was due June 4, 2014, completed on March 13, 2014 with letter 14-TF-0020, "The U.S. Department of Energy, Office of River Protection Submits the Retrieval Data Report for Tank 241-C-109."
- M-045-86H: RDR for C-110 was due January 29, 2015, completed on August 6, 2014 with letter 14-TF-0086, "The U.S. Department of Energy, Office of River Protection Submits the Retrieval Data Report for Tank 241-C-110."
- M-045-86K: RDR for C-112 was due September 30, 2015, completed on September 30, 2015 with letter 15-TF-0098, "The U.S. Department of Energy, Office of River Protection Submits the Retrieval Data Report for Tank 241-C-112."

Significant Past Accomplishments:

- Completed post retrieval samples of Tank C-102.
- Obtained Tank 241-C-105 in-process sample.
- Started preparations for equipment removal of the Tank C-105 Mobile Arm Retrieval System – Vacuum (MARS-V), to ready tank for modification to modified sluicing system (remaining volume of 67,300 gallons)
- Completed removal of ancillary equipment from Tank 241-C-105 pits A and C in preparation for modified sluicing system installation
- Completed three retrieval technologies at Tank 241-C-111.
- Procured sampling equipment for Tank 241-C-111 post retrieval samples

- Started preparations for post-retrieval sampling of Tank 241-C-111
- Completed Tank 241-AX-102 cover block removal
- Completed Tank 241-AX-104 cover block removal
- Completed pit cleanout of Tank 241-AX-102, 02A pit.
- Initiated pit cleanout of Tank 241-AX-104, 04D pit
- Completed removal of Building AX-80

Significant Planned Activities in the Next Six Months:

- Complete procurement of the water services building to support A/AX
- Complete AX ventilation installation and commence testing at portable exhaustor POR-126
- Installation of permanent ingress/egress access trailers in support of A/AX
- Complete cleanout of Tank 241-AX-104 pits 04A, and 04D, and initiate debris removal from 04C
- Complete cleanout of Tank 241-AX-102 pits 02D, and 02B, and initiate debris removal from 02C
- Complete AX-2707 fencing and gate upgrades
- Complete building AX-2707 removal and disposal
- Complete A Farm ventilation design
- Obtain Tank Waste Retrieval Work Plan (TWRWP) modification approval for Tank C-105 third retrieval technology
- Negotiate contract proposal for installing and performing the third retrieval technology at Tank C-105
- Complete Tank C-105 MARS-V in tank equipment removal mockup
- Complete Tank C-105 MARS-V containment box disassembly
- Complete Tank C-105 modified sluicing system design
- Receive Tank C-105 extended reach sluicers
- Complete Tank C-111 post-retrieval sampling
- Issue Tank C-111 Retrieval Completion Certification
- Complete A/AX infrastructure (water and utilities) design.
- Complete Tank 241-AX-102 and 241-AX-104 Extended Reach Sluicing System (ERSS) procurement.

Issues: None.

Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-104	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 8	Third Technology	MARS-V	MARS-V-High Pressure Water Spray	TBD
C-107	RPP-22393, Rev. 7	Complete	MARS-S	MARS-S -High Pressure Water Spray	Water Dissolution
C-108	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0025	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0037	-
C-110	RPP-33116, Rev. 3	Complete	Modified Sluicing	Mechanical Waste Conditioning with an In-Tank Vehicle	High Pressure Water
C-111	RPP-37739, Rev. 2	Complete	Modified Sluicing	High pressure water using the ERSS	Chemical Dissolution Process with ERSS
C-112	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process	-

ERSS = Extended Reach Sluicing System
MARS = Mobile Arm Retrieval System
S = sluicing

TBD = To Be Determined
TWRWP = Tank Waste Retrieval Work Plan
V = vacuum

Significant Accomplishments: None.

Significant Planned Activities in the Next Six Months:

- Finalize AX Farm tank waste retrieval work plans.
- Modify RPP-22520, 241-C-101, and 241-C-105, *Tanks Waste Retrieval Work Plan*, (C-105 TWRWP) to include a third technology for C-105 retrieval — Draft TWRWP modification submitted to Ecology for review in April 2016.
-

Issues: None.

Tank in Appendix H, "Status - Single Shell Waste Retrieval Criteria"

Tank 241-C-106

Significant Past Accomplishments: None.

Significant Planned Activities in the Next Six Months:

- Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A request for additional information was received from the NRC in February 2009.

Issues:

- It has been discussed with the NRC that much of the additional information requested is dependent upon development of C Farm residual waste PA and, therefore, cannot be provided until the PA is published.

Tank Retrievals with Individual Milestones

Tank 241-A-103

M-045-15, Completion of Tank A-103 SST Waste Retrieval, Due: September 30, 2022, Status: On schedule. Change package M-045-11-04 replaced Tank S-102 with Tank A-103 and changed the milestone completion date for M-045-15 to September 30, 2022.

M-045-15A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I, Due: September 30, 2022, Status: On schedule. Updated with Tank A-103 and due date of September 30, 2022, per change package M-045-11-04.

M-045-15D, Embedded Milestone, if appropriate, DOE will request an exception to waste retrieval criteria pursuant to Agreement Appendix H, Due: September 30, 2022, Status: On schedule. Updated with Tank A-103 and due date of September 30, 2022, per change package M-045-11-04.

Significant Past Accomplishments:

- Change package M-045-11-04 was signed by ORP and Ecology on April 19, 2011.

No significant planned activities in the next six months and no issues for Tank 241-A-103.

Tank 241-S-112

M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project, Due: To be determined (in accordance with M-045-84 or M-045-85), Status: On schedule.

M-045-13E, Complete Negotiations for Interim Milestones for Closure of S-112, Due: To be determined, Status: On schedule as part of M-045-84 or M-045-85.

Significant Past Accomplishments:

- Ecology letter of January 7, 2008, concurred with ORP that retrieval of Tank S-112 is complete.

No significant planned activities in the next six months and no issues for Tank 241-S-112.

Final

**Office of River Protection
Consent Decree 2:08-CV-5085-RMP (2016)**

Monthly Report

MAY 2016

Office of River Protection**Consent Decree 08-5085-FVS and Consent Decree 2:08-CV-5085-RMP****Monthly Report – May 2016****Project Earned Value Management System reflects March 2016 information**

Page	Topic	Leads
3	CD Milestone Statistics/Status	Bryan Trimberger/Dan McDonald/Jeff Lyon
5	Consent Decree Reports/Reviews	
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7	Single-Shell Tank Retrieval Program • D-16B-01, D-16B-02, D-16B-03	Chris Kemp/Jeff Lyon
9	Tank Waste Retrieval Work Plan Status • Consent Decree Appendix C	Chris Kemp/Jeff Lyon
12	Waste Treatment and Immobilization Plant Project • D-00A-06, D-00A-17, D-00A-01	Joni Grindstaff/Dan McDonald
15	Pretreatment Facility • D-00A-18, D-00A-19, D-00A-13, D-00A-14, D-00A-15, D-00A-16	Dan Knight/Dan McDonald
18	High-Level Waste Facility • D-00A-20, D-00A-21, D-00A-02, D-00A-03	Wahed Abdul/Dan McDonald
21	Low-Activity Waste Facility • D-00A-07, D-00A-08, D-00A-09	Jeff Bruggeman/Dan McDonald
24	Balance of Facilities • D-00A-12	Jason Young/Dan McDonald
26	Analytical Laboratory • D-00A-005	
28	Waste Treatment Plant Project Percent Complete Status (Table)	

CD = Consent Decree

CD Milestone Statistics/Status

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2020				
D-00A-07 Interim	LAW Facility Construction Substantially Complete	12/31/2020		On Schedule
D-16B-03*	Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5.	12/31/2020		On Schedule
Fiscal Year 2022				
D-00A-08 Interim	Start LAW Facility Cold Commissioning	12/31/2022		On Schedule
Fiscal Year 2023				
D-00A-09 Interim	LAW Facility Hot Commissioning Complete	12/31/2023		On Schedule
Fiscal Year 2024				
D-16B-01*	Complete Retrieval of Tank Waste from the following remaining SSTs in WMA-C: C-102, C-105 and C-111	3/31/2024		On Schedule
D-16B-02*	Complete retrieval of tank wastes from the following SSTs in Tank Farms A and AX: A-101, A-102, A-104, A-105, A-106, AX-101, AX-102, AX-103, and AX-104. Subject to the requirements of Section IV-B-3 DOE may substitute any of the identified 9 SSTs and advise Ecology accordingly.	3/31/2024		On Schedule
Fiscal Year 2030				
D-00A-02 Interim	HLW Facility Construction Substantially Complete	12/31/2030		On Schedule
Fiscal Year 2031				
D-00A-13 Interim	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2031		On Schedule
D-00A-14 Interim	PT Facility Construction Substantially Complete	12/31/2031		On Schedule

Milestone	Title	Due Date	Completion Date	Status
D-00A-19 Interim	Complete Elevation 98 feet Concrete Floor Slab Placements in PT Facility	12/31/2031		On Schedule
Fiscal Year 2032				
D-00A-03 Interim	Start HLW Facility Cold Commissioning	06/30/2032		On Schedule
D-00A-06 Interim	Complete Methods Validations	06/30/2032		On Schedule
D-00A-15 Interim	Start PT Facility Cold Commissioning	12/31/2032		On Schedule
Fiscal Year 2033				
D-00A-04 Interim	HLW Facility Hot Commissioning Complete	12/31/2033		On Schedule
D-00A-16 Interim	PT Facility Hot Commissioning Complete	12/31/2033		On Schedule
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2033		On Schedule
Fiscal Year 2036				
D-00A-01	Achieve Initial Plant Operations for the Waste Treatment Plan**	12/31/2036		On Schedule

* Milestones B-1, B-2, and B-3 narrative changed in accordance with 2016 amended Consent Decree (CD). Per this amendment, there is no longer a milestone B-4.

** Error in the CD - last word of the D-00A-01 milestone should be Plant

CD = Consent Decree.

DOE = U.S. Department of Energy

Ecology = Washington State Department of Ecology

HLW = high-level waste.

LAW = low-activity waste.

PT = pretreatment.

SST = single-shell tank.

WMA-C = C Farm waste management area.

Consent Decree Reports/Reviews

D-16C-03 series, Submit to State of Washington and State of Oregon Quarterly Report,
Due: TBD, Status: On Schedule.

In accordance with the 2016 Amended Consent Decree, DOE will provide quarterly instead of semiannual reports.

The January 2016 Semiannual Report was issued on January 29, 2016, via U.S. Department of Energy (DOE), Office of River Protection (ORP) letter 16-ECD-0006, "January 2016 Semi-Annual Report for State of Washington vs. U.S. Department of Energy, Case No. 08-5085-FVS, for Waste Treatment and Immobilization Plant Construction and Startup Activities and Tank Retrieval Activities – May 1, 2015, through October 31, 2015."

D-00C-02 series, Submit to State of Washington and State of Oregon Monthly Summary Reports, Due: End of each month, Status: On Schedule.

D-006-00-B1, Provide State of Oregon notice of meetings in D-006-00-B, etc. no less than 30 days before they are scheduled, Due: September 25, 2016, Status: On Schedule.

D-006-00-B, Meet Approximately Every Three Years after Entry of Decree to review requirements of the Consent Decree, Due: October 25, 2016, Status: On Schedule.

Spare Reboiler Requirement Status

Milestone	Title	Due Date	Status
D-16E-01	DOE must purchase by December 31, 2016 a spare A-E-1* reboiler for the 242-A Evaporator**	12/31/2016	On Schedule
D-16E-02	Have available spare A-E-1* reboiler for the 242-A Evaporator**	12/31/2018	On Schedule

* Error in the Consent Decree (CD), part should be identified as E-A-1

**CD 08-5085-FVS, Part IV B.5 as amended by No. 2:08-CV-5085-RMP dated April 12, 2016

Description of activity and progress made for the spare E-A-1 reboiler for the 242-A Evaporator:

- Since issuance of the March 11, 2016 amended consent order, DOE has provided the contractor with funding to accelerate the planned fiscal year (FY) 2017 work to design and procure the spare E-A-1 reboiler. ORP authorized Washington River Protection Solutions LLC (WRPS) to proceed by awarding a not-to-exceed (NTE) contract action. The contractor is currently underway generating a procurement specification for the new spare 242-A Evaporator reboiler. The current procurement strategy is to award a design/build procurement contract with a vendor by November 20, 2016.
- Current efforts include the generation of a functions and requirements evaluation document (FRED) as well as a failure mode and effects analysis (FMEA) document. An expression of interest was submitted Tuesday, April 19 to solicit responses from NQA-1, ASME Section 8 design and build fabrication vendors. A design specification is also being generated for the new spare 242-A Evaporator re-boiler. This specification will be attached to a statement of work (SOW) submitted to the request for proposal (RFP) to solicit a design/ build vendor.

Single-Shell Tank Retrieval Program

Milestone	Title	Due Date	Status
D-16B-03	Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5.	12/31/2020*	On Schedule
D-16B-01	Complete retrieval of tank waste from the following remaining SSTs in WMA-C: C-102, C-105 and C-111	3/31/2024	On Schedule
D-16B-02	Complete retrieval of tank wastes from the following SSTs in Tank Farms A and AX: A-101, A-102, A-104, A-105, A-106, AX-101, AX-102, AX-103, and AX-104. Subject to the requirements of Section IV-B-3 DOE may substitute any of the identified 9 SSTs and advise Ecology accordingly.	3/31/2024	On Schedule

* Pursuant to Section IV-B-5 7 of the Consent Decree, the U.S. Department of Energy (DOE) must submit to the Washington State Department of Ecology (Ecology) a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix C, Part 1, of the Consent Decree.

DOE = U.S. Department of Energy

SST = single shell tank

WMA-C = C Farm waste management area.

Significant Accomplishments during the Prior Three Months:

- Completed post retrieval samples of Tank C-102.
- Obtained Tank 241-C-105 in-process sample.
- Retrieved waste from Tank 241-C-105 utilizing the Mobile Arm Retrieval System – Vacuum (MARS-V) and high-pressure water to a remaining volume of 67,300 gallons.
- Started preparations for equipment removal of the Tank C-105 MARS-V, to ready tank for modification to modified sluicing system (remaining volume of 67,300 gallons)
- Completed removal of ancillary equipment from 241-C-105 pits A and C in preparation for modified sluicing system installation.
- Completed three retrieval technologies to their limits at Tank 241-C-111.
- Procured sampling equipment for 241-C-111 post retrieval samples
- Started preparations for post-retrieval sampling of Tank 241-C-111

- Completed Tank 241-AX-102 cover block removal.
- Completed pit cleanout of Tank 241-AX-102, 02A pit
- Completed Tank 241-AX-104 cover block removal.
- Initiated pit cleanout of Tank 241-AX-104, 04D pit
- Completed removal of building AX-80

Significant Planned Activities in the Next Three Months:

- Complete procurement of the water services building to support A/AX
- Complete AX ventilation installation and commence testing at portable exhauster POR-126
- Install permanent ingress/egress access trailers in support of A/AX
- Complete cleanout of Tank 241-AX-104 pits 04A, 04D and initiate debris removal from 04C
- Complete cleanout of Tank 241-AX-102 pits 02D, 02B and initiate debris removal from 02C
- Complete AX-2707 fencing and gate upgrades
- Complete Building AX-2707 removal and disposal
- Complete A Farm ventilation design
- Obtain Tank Waste Retrieval Work Plan (TWRWP) modification approval for Tank C-105 third retrieval technology
- Negotiate contract proposal for installing and performing the third retrieval technology at Tank C-105
- Complete Tank C-105 MARS-V in tank equipment removal mockup
- Complete Tank C-105 MARS-V containment box disassembly
- Complete Tank C-105 modified sluicing system design
- Receive Tank C-105 extended reach sluicers
- Complete Tank C-111 post-retrieval sampling
- Issue Tank C-111 retrieval completion certification
- Complete A/AX infrastructure (water and utilities) design.
- Complete Tank 241-AX-102 and 241-AX-104 Extended Reach Sluicing System (ERSS) procurement.

Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-104	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 8	Third Technology	MARS-V	MARS-V-High Pressure Water Spray	TBD
C-107	RPP-22393, Rev. 7	Complete	MARS-S	MARS-S-High Pressure Water Spray	Water Dissolution
C-108	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0025	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0037	-
C-110	RPP-33116, Rev. 3	Complete	Modified Sluicing	Mechanical Waste Conditioning with an In-Tank Vehicle	High Pressure Water
C-111	RPP-37739, Rev. 2	Complete	Modified Sluicing	High pressure water using the ERSS	Chemical Dissolution Process with ERSS
C-112	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process	-

ERSS = extended reach sluicing system.
MARS = Mobile Arm Retrieval System.
S = sluicing.

TBD = to be determined.
TWRWP = Tank Waste Retrieval Work Plan.
V = vacuum.

Significant Planned Activities in the Next Three Months:

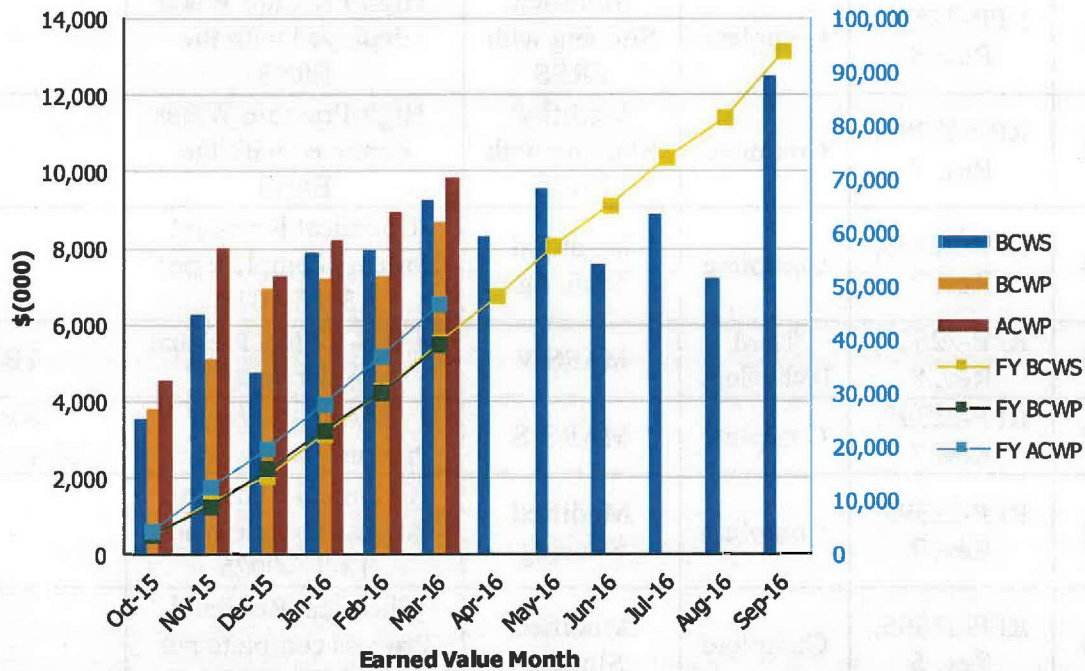
- Finalize AX Farm tank waste retrieval work plans (TWRWPs).
- Modify RPP-22520 241-C-101 and 241-C-105 Tanks Waste Retrieval Work Plan (C-105 TWRWP) to include a third technology for Tank C-105 retrieval—Draft TWRWP modification submitted to Ecology for review in April 2016.

Earned Value Data: Fiscal Year 2016

March-16

Tank Farms ORP-0014
Retrieve and Close SST's 5.02

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$3,557	\$3,814	\$4,560	1.07	0.84	\$3,557	\$3,814	\$4,560	1.07	0.84
Nov 2015	\$6,282	\$5,131	\$8,006	0.82	0.64	\$9,839	\$8,946	\$12,566	0.91	0.71
Dec 2015	\$4,769	\$6,970	\$7,255	1.46	0.96	\$14,608	\$15,915	\$19,821	1.09	0.80
Jan 2016	\$7,914	\$7,214	\$8,233	0.91	0.88	\$22,522	\$23,130	\$28,053	1.03	0.82
Feb 2016	\$7,948	\$7,288	\$8,959	0.92	0.81	\$30,470	\$30,417	\$37,012	1.00	0.82
Mar 2016	\$9,249	\$8,693	\$9,857	0.94	0.88	\$39,719	\$39,111	\$46,869	0.98	0.83
Apr 2016	\$8,312					\$48,031				
May 2016	\$9,597					\$57,628				
Jun 2016	\$7,584					\$65,212				
Jul 2016	\$8,923					\$74,135				
Aug 2016	\$7,228					\$81,363				
Sep 2016	\$12,499					\$93,862				

CTD	\$632,197	\$624,338	\$656,842	0.99	0.95
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ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date.
 EVMS = earned value management system.
 FY = fiscal year.
 SPI = schedule performance index.

Retrieve and Close Single-Shell Tanks

The current month unfavorable schedule variance (SV) of **(\$556K)** is due to:

- Multiple work stoppages related to self-contained breathing apparatus (SCBA) technical challenges limited work in single-shell tank farms (C-Farm & A/AX Farm) during March.

The current month unfavorable cost variance (CV) of **(\$1,159K)** is due to:

- Additional resources and duration have been required to support AX-Farm ventilation installation field activities due to SCBA requirements. As a result ventilation installation activities are being reevaluated by Engineering causing fieldwork to delay resulting in inefficiency of crews.

Waste Treatment and Immobilization Plant Project

Milestone	Title	Due Date	Status
D-00A-06	Complete Methods Validations	6/30/2032	On Schedule
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2033	On Schedule
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2036	On Schedule

WTP = Waste Treatment and Immobilization Plant

The Waste Treatment and Immobilization Plant (WTP) Project currently employs approximately 3,039 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 532 craft, 448 non-manual, and 131 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

In October 2012, the percent-complete values for the Pretreatment (PT) and High-Level Waste (HLW) facilities were frozen at the September 2012 rate. Construction, procurement, and production engineering activities were placed on hold for the PT Facility and significantly slowed down for the HLW Facility. In August 2014, the U.S. Department of Energy (DOE) approved continuation of production engineering activities for HLW. Subsequently, DOE has approved the fiscal year (FY) 2015 and FY 2016 2-Year Interim Work Plan. In April 2015, a 3-Year Interim Work Plan for the PT Facility was implemented emphasizing prioritization of technical issue resolution activities. The WTP Project is focused on resolving the PT Facility technical issues and finalizing the HLW Facility design.

The WTP Project continues to focus on completion of the Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) (collectively known as LBL, including direct feed LAW and LBL facility services). As of March 2016, LBL facilities were 46 percent complete, design and engineering was 71 percent complete, procurement was 63 percent complete, construction was 63 percent complete, and startup and commissioning was 9 percent complete.

In March 2016, the cumulative to-date WTP Project schedule variance (SV) was a negative \$20.1 million, and the cumulative to-date WTP Project cost variance (CV) was a positive \$60.7 million. The cumulative to-date CV and SV is based on the progress of the LBL internal forecast.

The following is the project status through the end of March 2016.

Significant Accomplishments during the Prior Three Months:

- Received and staged the thermal catalytic oxidizer (TCO) and ammonia dilution skid (ADS) on greater than the 48 foot (+48') elevation – (LAW)
- Melter lid 1 was successfully flipped and placed on the melter – (LAW)
- Contractor provided plans for hydrogen gas release from vessels – pending ORP review (PT)

- Issued facility hazards analysis to support Preliminary Documented Safety Analysis (PDSA) update – (HLW)
- Completed drilling activities for cathodic protection system anodes and started excavation for rectifier and anode cable installation – (BOF)
- Contractor completed installation of pulse-jet mixers (PJM) in vessel at Greenberry Industrial, Inc. - (PT)
- DOE Office of River Protection (ORP) approved Preliminary Documented Safety Analysis (PDSA) for the Effluent Management Facility (EMF) – (BOF)
- Completed installation of the mud mat for the EMF processing, electrical and utility buildings – (BOF)

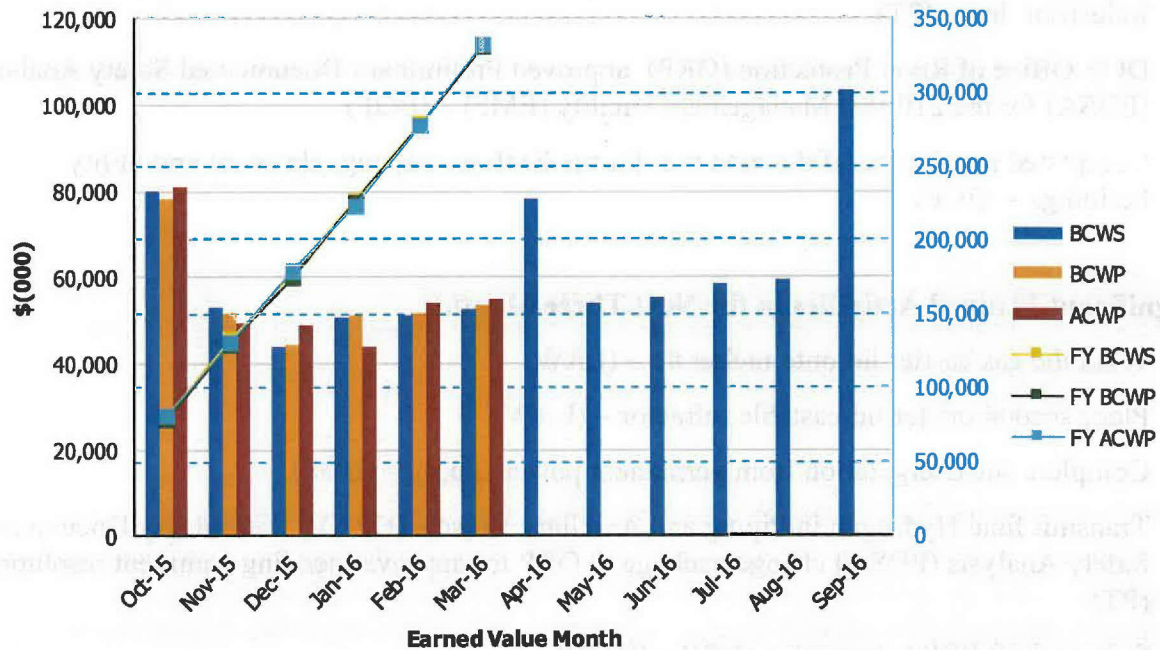
Significant Planned Activities in the Next Three Months:

- Weld the gas barrier lid onto melter #1 – (LAW)
- Place second melter lid castable refractor – (LAW)
- Complete site energization from permanent power supply – (BOF)
- Transmit final Hydrogen in Piping and Ancillary Vessels (HPAV) Preliminary Documented Safety Analysis (PDSA) change package to ORP for approval pending comment resolution – (PT)
- Submit draft PDSA revision to ORP – (HLW)
- Finalize erosion/corrosion simulant for one-quarter scale jet impingement and pipe loop testing – (PT)

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: March 2016

Waste Treatment Plant (WTP) Project**EVMS Monthly and Fiscal Year Values**

Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$79,800	\$78,230	\$81,000	0.98	0.97	\$79,800	\$78,230	\$81,000	0.98	0.97
Nov 2015	\$52,815	\$51,614	\$49,184	0.98	1.05	\$132,615	\$129,844	\$130,184	0.98	1.00
Dec 2015	\$43,659	\$44,505	\$48,853	1.02	0.91	\$176,275	\$174,348	\$179,037	0.99	0.97
Jan 2016	\$50,515	\$51,167	\$43,662	1.01	1.17	\$226,790	\$225,515	\$222,699	0.99	1.01
Feb 2016	\$51,349	\$51,492	\$54,112	1.00	0.95	\$278,139	\$277,007	\$276,811	1.00	1.00
Mar 2016	\$52,395	\$53,645	\$54,896	1.02	0.98	\$330,533	\$330,653	\$331,707	1.00	1.00
Apr 2016	\$78,321									
May 2016	\$54,072									
Jun 2016	\$55,456									
Jul 2016	\$58,503									
Aug 2016	\$59,626									
Sep 2016	\$103,329									

PTD	\$9,430,297	\$9,410,199	\$9,349,510	1.00	1.01
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ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date.
 EVMS = earned value management system.
 FY = fiscal year.
 SPI = schedule performance index.

Pretreatment Facility

Milestone	Title	Due Date	Status
D-00A-19	Complete Elevation 98' Concrete Floor Slab in PT Facility	12/31/2031	On Schedule
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2031	On Schedule
D-00A-14	PT Facility Construction Substantially Complete	12/31/2031	On Schedule
D-00A-15	Start PT Facility Cold Commissioning	12/31/2032	On Schedule
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2033	On Schedule

PT = pretreatment

The Pretreatment (PT) Facility will separate radioactive tank waste into high-level waste (HLW) and low-activity waste (LAW) fractions, and transfer each waste type to the respective vitrification facility for immobilization. As of September 2012, the PT Facility was 56 percent complete overall, with engineering design 85 percent complete, procurement 56 percent complete, construction 43 percent complete, and startup and commissioning 3 percent complete. Construction, procurement, and production engineering activities remain on hold, resulting in no change to the percent-complete status since September 2012. Bechtel National, Inc. (BNI) and U.S. Department of Energy (DOE) continue to focus on resolving technical issues, performing hazards analyses, and completing safety evaluations for process systems in accordance with the revised PT Facility 3-year Interim Work Plan

BNI has submitted resolution plans for eight technical issues: T1, Hydrogen in Vessels; T2, Criticality; T3, Hydrogen in Piping and Ancillary Vessels (HPAV); T4, Mixing; T5, Erosion Corrosion; T6, PT Facility Optimization; T7, Vessel Analysis; and T8, Ventilation. Phase 1 of the full-scale vessel testing is continuing for the pulse jet mixers (PJM) controls utilizing the radioactive liquid waste disposal (RLD) 8T vessel. Technical review teams continue to evaluate open PT Facility technical issues. An evaluation is ongoing relative to a standardized design for high-solids vessels within the PT Facility. With primary emphasis on design and fabrication of hold point releases supporting procurement, fabrication, and delivery of the standardized high solids vessel design (SHSVD)-T16ft vessel.

Significant Accomplishments during the Prior Three Months:

- Contractor issued plutonium (Pu) particulate criticality safety evaluation (CSE) engineering study – pending resolution of DOE Office of River Protection (ORP) comments
- Contractor provided plans for hydrogen gas release from vessels – pending ORP review

- ORP continues to review Waste Treatment and Immobilization Plant (WTP) Criticality Safety Evaluation Report (CSER)
- Contractor completed installation of PJMs in SHSVD-T at Greenberry Industrial, Inc.
- SHSVD-T top head was welded to body
- Complete platform steel removal for SHSVD-T
- Issued chemistry study for testing SHSVD-T
- Draft HPAV Preliminary Documented Safety Analysis (PDSA) change package – pending ORP review and comments

Significant Planned Activities in the Next Three Months:

- Transmit final HPAV PDSA change package to ORP for approval pending comment resolution
- Contractor to transmit to ORP engineering study of proposed controls for hydrogen events
- Issue PJM Controls Phase 3 test specifications
- Install SHSVD-T bubblers
- Issue simulant qualification document
- Issue SHSVD Design Verification Guide
- Finalize erosion/corrosion simulant for one-quarter scale jet impingement and pipe loop testing
- Complete sliding bed evaluation reports and transmit for ORP review

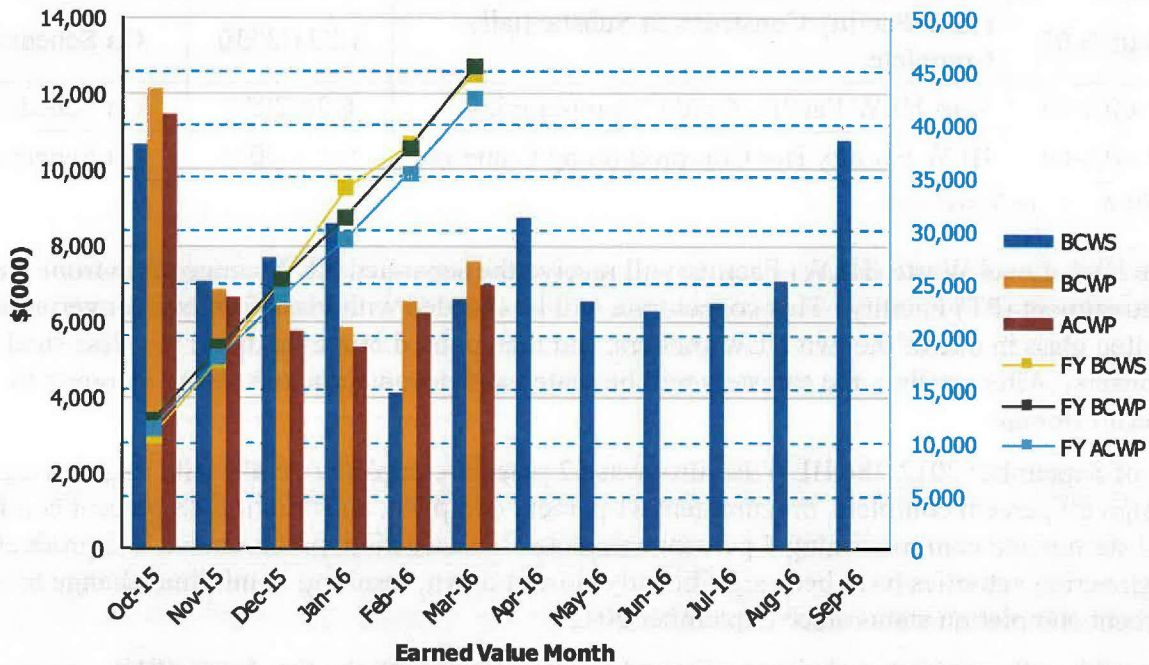
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: March 2016

River Protection Project Pretreatment Facility (WBS 1.01)
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EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$10,667	\$12,155	\$11,441	1.14	1.06	\$10,667	\$12,155	\$11,441	1.14	1.06
Nov 2015	\$7,074	\$6,836	\$6,648	0.97	1.03	\$17,741	\$18,991	\$18,089	1.07	1.05
Dec 2015	\$7,678	\$6,441	\$5,777	0.84	1.11	\$25,419	\$25,432	\$23,867	1.00	1.07
Jan 2016	\$8,595	\$5,853	\$5,332	0.68	1.10	\$34,014	\$31,285	\$29,199	0.92	1.07
Feb 2016	\$4,105	\$6,545	\$6,220	1.59	1.05	\$38,120	\$37,830	\$35,419	0.99	1.07
Mar 2016	\$6,588	\$7,604	\$6,979	1.15	1.09	\$44,708	\$45,434	\$42,398	1.02	1.07
Apr 2016	\$8,717									
May 2016	\$6,560									
Jun 2016	\$6,269									
Jul 2016	\$6,511									
Aug 2016	\$7,081									
Sep 2016	\$10,762									

PTD	\$1,777,108	\$1,777,266	\$1,754,957	1.00	1.01
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 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

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High-Level Waste Facility

Milestone	Title	Due Date	Status
D-00A-20	Complete Construction of Structural Steel to 14' in HLW Facility	12/31/2010	Complete
D-00A-21	Complete Construction of Structural Steel to 37' in HLW Facility	12/31/2012	Complete
D-00A-02	HLW Facility Construction Substantially Complete	12/31/2030	On Schedule
D-00A-03	Start HLW Facility Cold Commissioning	6/30/2032	On Schedule
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2033	On Schedule

HLW = high-level waste

The High-Level Waste (HLW) Facility will receive the separated HLW concentrate from the Pretreatment (PT) Facility. This concentrate will be blended with glass formers, converted into molten glass in one of the two HLW melters, and then poured into cylindrical stainless steel canisters. After cooling, the canisters will be sealed and decontaminated before shipping to interim storage.

As of September 2012, the HLW Facility was 62 percent complete overall, with engineering design 89 percent complete, procurement 81 percent complete, construction 43 percent complete, and startup and commissioning 4 percent complete. Construction, procurement, and production engineering activities have been significantly slowed down, resulting in minimal change to the percent completion status since September 2012.

Currently, all activities are being performed in accordance with the fiscal year (FY) 2015/FY 2016 2-Year Work Plan. Efforts are focused on completing activities required to obtain full-production authorization by the U.S. Department of Energy (DOE), including developing longer-term work plans. Limited construction is continuing with the concrete placements, installation of support steel, and crane rails in the melter caves.

Engineering is focused on activities to support implementation of technical core team recommendations, performance of engineering studies and analysis to disposition design and operability review comments. Phase 1 of the HLW melter off-gas treatment process/process vessel vent engineering study, which is evaluating options for system changes to improve the design and operability, is ongoing. Process hazard analysis has been completed to support the Preliminary Documented Safety Analysis (PDSA) update to align design and the safety basis.

Systems engineering continues to develop system design descriptions (SDD), and incorporate SDD requirements into a requirements management system to ensure that all requirements are verified at the completion of design.

Multiple high-efficiency particulate air (HEPA) filter media designs are planned to be tested to ensure the qualified filters support the needs for HLW, along with the Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and the Balance of Facilities (BOF) (collectively known as LBL, including LBL facility services). Testing of the full-scale filter designs at

Mississippi State University is ongoing. The third full-scale filter has been tested, showing positive and successful test results. Fabrication of the additional filters and testing continues. Qualification testing of Flanders filters has begun.

Significant Accomplishments during the Prior Three Months:

- Completed full-scale tests of three filters of the first HEPA filter design that showed positive results
- PDSA change package for radioactive liquid waste disposal (RLD) vessels 7 and 8 approved by DOE has been incorporated into the PDSA
- Issued the revised RLD system design description incorporating PDSA changes
- Issued the emergency turbine generator system (ETX) system design description
- Completed roof flashing at interface between the annex and the main facility, thereby rain-proofing the annex
- Approved Mississippi State University's NQA-1 quality assurance program for the HEPA filter testing
- Issued facility hazards analysis to support PDSA update

Significant Planned Activities in the Next Three Months:

- Continue full-scale HEPA filter testing to select and qualify additional filter(s) that will support the WTP ventilation and off-gas needs
- Issue Phase 1 of the HLW melter off-gas treatment process/process vessel vent engineering study
- Issue the radioactive waste handling system, decontamination handling system, melter handling system, and melter cave support handling system engineering studies
- Issue an engineering study detailing the potential addition of a melter assembly building/airlock and an additional import/export dock for waste handling
- Submit draft PDSA revision to the DOE Office of River Protection (ORP)
- Continue civil build-out of the HLW Facility

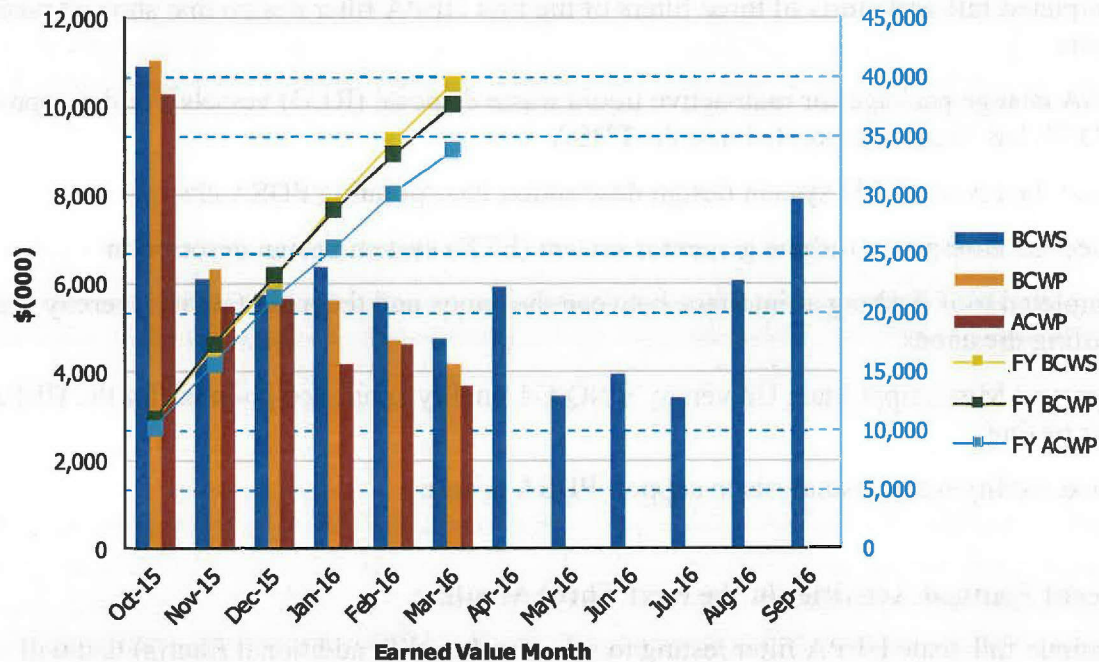
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: March 2016

River Protection Project High-Level Waste Facility (WBS 1.03)
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EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$10,905	\$11,028	\$10,257	1.01	1.08	\$10,905	\$11,028	\$10,257	1.01	1.08
Nov 2015	\$6,103	\$6,326	\$5,452	1.04	1.16	\$17,008	\$17,355	\$15,708	1.02	1.10
Dec 2015	\$5,737	\$5,795	\$5,634	1.01	1.03	\$22,745	\$23,150	\$21,343	1.02	1.08
Jan 2016	\$6,368	\$5,591	\$4,174	0.88	1.34	\$29,113	\$28,741	\$25,517	0.99	1.13
Feb 2016	\$5,551	\$4,711	\$4,631	0.85	1.02	\$34,664	\$33,453	\$30,148	0.97	1.11
Mar 2016	\$4,740	\$4,169	\$3,673	0.88	1.14	\$39,405	\$37,622	\$33,821	0.95	1.11
Apr 2016	\$5,921									
May 2016	\$3,466									
Jun 2016	\$3,948									
Jul 2016	\$3,397									
Aug 2016	\$6,040									
Sep 2016	\$7,911									

PTD	\$1,240,693	\$1,237,887	\$1,219,951	1.00	1.01
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ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

CTD = contract to date.
 EVMS = earned value management system.
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 SPI = schedule performance index.

Low-Activity Waste Facility

Milestone	Title	Due Date	Status
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2020	On Schedule
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2022	On Schedule
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2023	On Schedule

LAW = low-activity waste

The Low-Activity Waste (LAW) Facility will process concentrated low-activity waste which will be mixed with silica and other glass-forming materials. The mixture will be fed into the LAW's two melters, at a design capacity of 30 metric tons per day, and heated to 2,100 degrees Fahrenheit and vitrified into glass. The 300-ton melters are approximately 20 feet by 30 feet and 16 feet high. The glass mixture will then be poured into stainless steel containers, which are 4 feet in diameter, 7 feet tall and weigh more than 7 tons. These containers are anticipated to be disposed of on the Hanford Site in the Integrated Disposal Facility. As of March 2016, the LAW Facility was 53 percent complete overall, with engineering design 73 percent complete, procurement 71 percent complete, construction 78 percent complete, and startup and commissioning 5 percent complete.

Significant Accomplishments during the Prior Three Months:

- Installed 570 linear feet of process piping
- Installed 3,560 linear feet of conduit and pulled 38,170 linear feet of cable
- Installed 332 process area penetration seals
- Received and staged the thermal catalytic oxidizer (TCO) and ammonia dilution skid (ADS) on greater than the 48 foot (+48') elevation
- Melter lid 1 was successfully flipped and placed on the melter
- Completed installation of Wet Electrostatic Precipitator (WESP) electrode assemblies in one vessel
- Completed TCO and ADS functional test
- Completed subcontractor work scope in the annex

Significant Planned Activities in the Next Three Months:

- Assemble and install WESP internals in second vessel
- Weld the gas barrier lid onto melter 1

- Place second melter lid castable refractor
- Complete Documented Safety Analysis (DSA) Chapter 3.3, “Hazards Analysis”
- Complete the radiographic testing on the caustic scrubber
- Continue the re-baselining review process
- Perform additional welds required on the melter shield lids

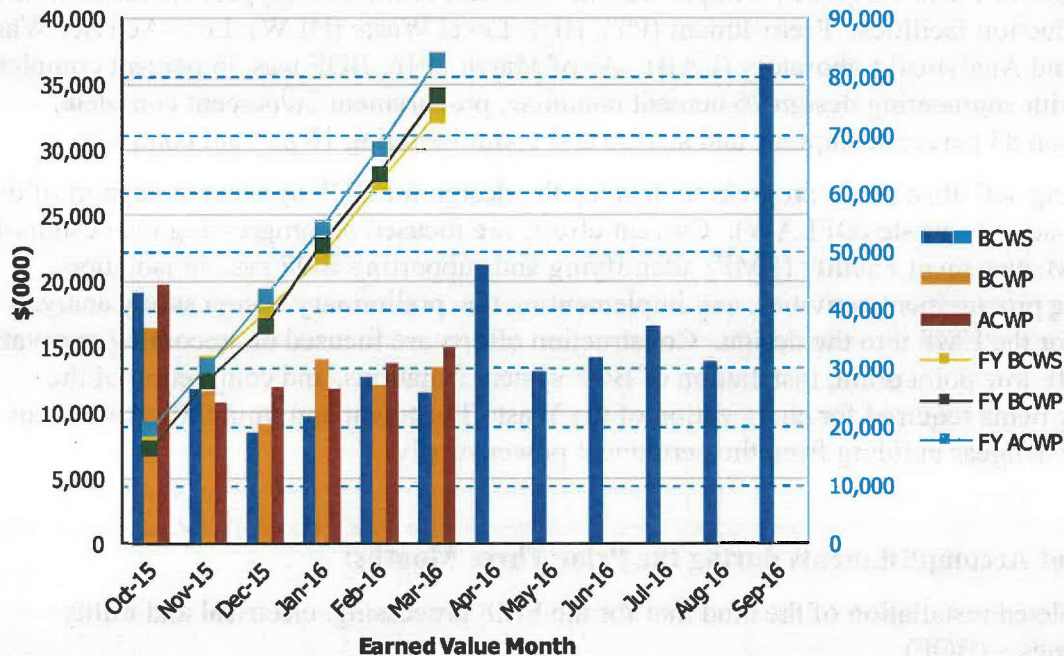
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: March 2016

River Protection Project Low-Activity Waste Facility (WBS 1.02)
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EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$19,131	\$16,406	\$19,702	0.86	0.83	\$19,131	\$16,406	\$19,702	0.86	0.83
Nov 2015	\$11,764	\$11,637	\$10,735	0.99	1.08	\$30,896	\$28,043	\$30,436	0.91	0.92
Dec 2015	\$8,520	\$9,132	\$11,880	1.07	0.77	\$39,416	\$37,175	\$42,316	0.94	0.88
Jan 2016	\$9,694	\$14,071	\$11,790	1.45	1.19	\$49,110	\$51,245	\$54,105	1.04	0.95
Feb 2016	\$12,760	\$12,055	\$13,698	0.94	0.88	\$61,870	\$63,300	\$67,804	1.02	0.93
Mar 2016	\$11,541	\$13,513	\$14,986	1.17	0.90	\$73,411	\$76,814	\$82,790	1.05	0.93
Apr 2016	\$21,172									
May 2016	\$13,212									
Jun 2016	\$14,200									
Jul 2016	\$16,622									
Aug 2016	\$13,935									
Sep 2016	\$36,493									

PTD	\$1,291,610	\$1,285,069	\$1,284,279	0.99	1.00
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ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
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Balance of Facilities

Milestone	Title	Due Date	Status
D-00A-12	Steam Plant Construction Complete	12/31/2012	Complete

The Balance of Facilities (BOF) will provide services and utilities to support operation of the main production facilities: Pretreatment (PT), High-Level Waste (HLW), Low-Activity Waste (LAW), and Analytical Laboratory (LAB). As of March 2016, BOF was 56 percent complete overall, with engineering design 76 percent complete, procurement 76 percent complete, construction 83 percent complete, and startup and commissioning 16 percent complete.

Engineering activities are in progress to develop the design for BOF systems in support of direct-feed, low-activity-waste (DFLAW). Current efforts are focused on progressing the design of the Effluent Management Facility (EMF), identifying and supporting BOF system isolations, supporting procurement activities, and implementing the preliminary design safety analysis (PDSA) for the EMF into the design. Construction efforts are focused on upcoming excavation of the EMF low point drain, installation of BOF system isolations, and completion of the remaining items required for energization of the Waste Treatment and Immobilization Plant (WTP) switchgear building from the permanent power supply.

Significant Accomplishments during the Prior Three Months:

- Completed installation of the mud mat for the EMF processing, electrical and utility buildings – (BOF)
- Continued installing communications in the switchgear buildings and nonradioactive liquid waste disposal (NLD)
- Continued installing the battery monitoring system in the switchgear buildings
- Issued Material Requisition Purchase (MRP) order for the rotary screw compressor
- Completed drilling activities for cathodic protection system anodes and started excavation for rectifier and anode cable installation
- The DOE Office of River Protection (ORP) approved the PDSA for EMF
- Completed Fire Service Water System FSW-B-02 system turnover

Significant Planned Activities in the Next Three Months:

- Award subcontract for soldier piles of EMF low point drain
- Complete site energization from permanent power supply
- Perform 90 percent design review of BOF programmable protection system (PPJ)

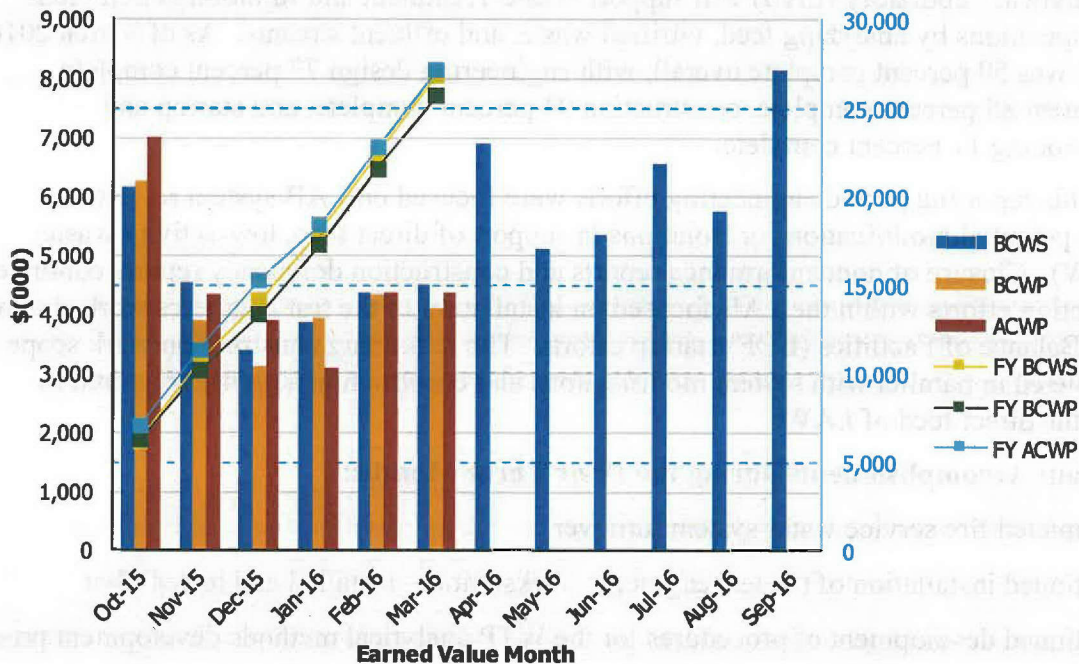
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: March 2016

River Protection Project Balance of Facilities (WBS 1.05)
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EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$6,160	\$6,249	\$7,006	1.01	0.89	\$6,160	\$6,249	\$7,006	1.01	0.89
Nov 2015	\$4,555	\$3,913	\$4,344	0.86	0.90	\$10,715	\$10,162	\$11,350	0.95	0.90
Dec 2015	\$3,400	\$3,134	\$3,917	0.92	0.80	\$14,115	\$13,296	\$15,267	0.94	0.87
Jan 2016	\$3,874	\$3,917	\$3,108	1.01	1.26	\$17,989	\$17,214	\$18,375	0.96	0.94
Feb 2016	\$4,367	\$4,344	\$4,357	0.99	1.00	\$22,356	\$21,557	\$22,732	0.96	0.95
Mar 2016	\$4,492	\$4,111	\$4,381	0.92	0.94	\$26,848	\$25,668	\$27,113	0.96	0.95
Apr 2016	\$6,900									
May 2016	\$5,101									
Jun 2016	\$5,335									
Jul 2016	\$6,554									
Aug 2016	\$5,765									
Sep 2016	\$8,156									

PTD	\$456,343	\$450,869	\$450,736	0.99	1.00
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 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

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 EVMS = earned value management system.
 FY = fiscal year
 SPI = schedule performance index

Analytical Laboratory

Milestone	Title	Due Date	Status
D-00A-05	LAB Construction Substantially Complete	12/31/2012	Complete

LAB = analytical laboratory

The Analytical Laboratory (LAB) will support Waste Treatment and Immobilization Plant (WTP) operations by analyzing feed, vitrified waste, and effluent streams. As of March 2016, the LAB was 59 percent complete overall, with engineering design 77 percent complete, procurement 88 percent complete, construction 94 percent complete, and startup and commissioning 11 percent complete.

During this reporting period engineering efforts were focused on LAB system reviews to evaluate potential modifications or isolations in support of direct feed, low-activity waste (DFLAW). Closure of nonconformance reports and construction deficiency reports continued. Construction efforts within the LAB focused on installation of the test engineers work station to support Balance of Facilities (BOF) startup efforts. The remaining construction work scope will be completed in parallel with system modifications and construction activities required to support the direct feed of LAW.

Significant Accomplishments during the Prior Three Months:

- Completed fire service water system turnover
- Continued installation of the test engineers workstation – installed and tested fiber
- Continued development of procedures for the WTP analytical methods development process.

Significant Planned Activities in the Next Three Months:

- Complete test engineers work station
- Initiate component level testing of select LAB systems
- Complete LAB system walk downs in support of DFLAW modifications.

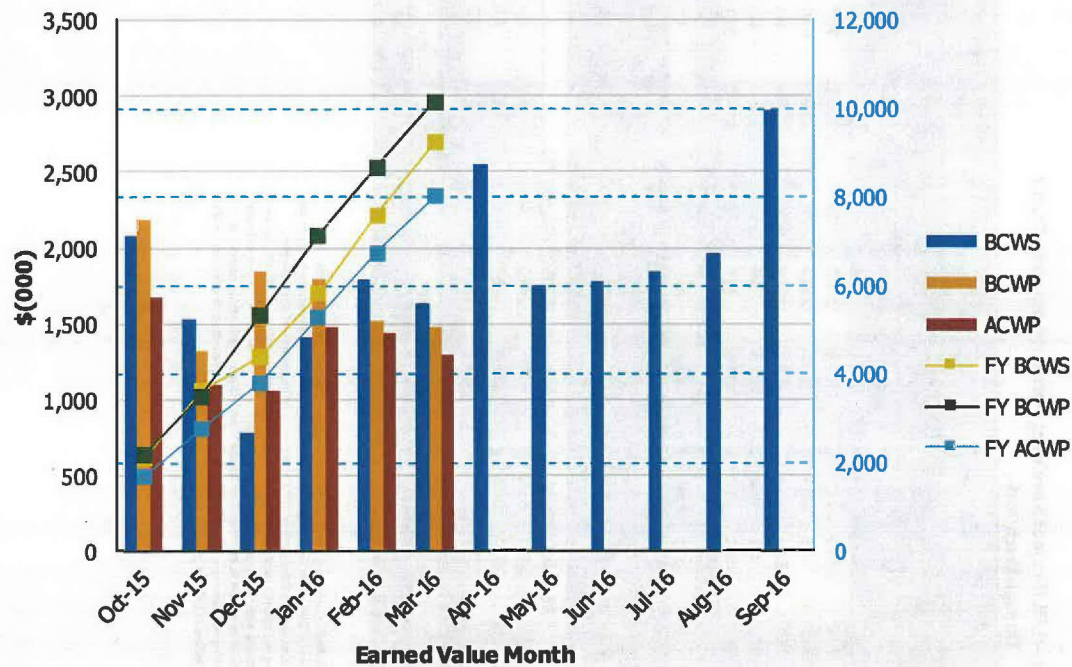
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: March 2016

River Protection Project Analytical Laboratory (WBS 1.06)
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EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$2,083	\$2,188	\$1,674	1.05	1.31	\$2,083	\$2,188	\$1,674	1.05	1.31
Nov 2015	\$1,528	\$1,324	\$1,093	0.87	1.21	\$3,611	\$3,513	\$2,768	0.97	1.27
Dec 2015	\$789	\$1,844	\$1,060	2.34	1.74	\$4,399	\$5,356	\$3,827	1.22	1.40
Jan 2016	\$1,415	\$1,797	\$1,472	1.27	1.22	\$5,815	\$7,153	\$5,299	1.23	1.35
Feb 2016	\$1,786	\$1,511	\$1,438	0.85	1.05	\$7,601	\$8,665	\$6,738	1.14	1.29
Mar 2016	\$1,628	\$1,478	\$1,291	0.91	1.15	\$9,229	\$10,143	\$8,028	1.10	1.26
Apr 2016	\$2,555									
May 2016	\$1,747									
Jun 2016	\$1,779									
Jul 2016	\$1,842									
Aug 2016	\$1,957									
Sep 2016	\$2,910									

PTD	\$321,794	\$321,062	\$316,377	1.00	1.01
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 BCWP = budgeted cost of work performed.
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 FY = fiscal year
 SPI = schedule performance index.

Waste Treatment Plant Project Percent Complete Status (Table)

**Waste Treatment Plant Project - (LBL/Project Services) Percent Complete Status
Through March 2016**

(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Plant Operations Unallocated Dollars			Project Management & Shared Services Unallocated Dollars		
	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Facilities																		
Low-Activity Waste	2,275.1	1,210.1	53%	533.6	392.0	73%	372.9	263.6	71%	658.1	512.8	78%	708.5	37.7	5%	4.0	4.0	100%
Balance of Facilities	758.2	423.1	56%	149.9	113.8	76%	71.6	54.5	76%	254.1	210.4	83%	280.1	44.0	16%	0.5	0.5	100%
Analytical Lab	530.7	313.1	59%	106.2	81.6	77%	65.4	57.4	88%	160.7	151.4	94%	197.9	22.3	11%	0.5	0.5	100%
Direct Feed LAW	373.0	36.4	10%	79.8	29.1	36%	57.0	0.8	1%	227.3	4.4	2%	0.0	0.0	0%	9.0	2.1	24%
LBL Facility Services	602.4	97.0	16%	0.0	0.0	0%	53.4	14.7	28%	128.9	18.8	15%	263.7	31.1	12%	156.4	32.40	21%
Total LBL	4,537.5	2,079.7	46%	869.5	616.5	71%	620.3	390.9	63%	1,429.1	897.7	63%	1,448.3	135.1	9%	170.3	39.5	23%
Project Services	368.8	284.0	77%	53.7	39.6	74%	34.9	26.2	75%	69.2	61.7	89%	1.7	1.7	100%	209.3	154.9	74%
Total Project Services	368.8	284.0	77%	53.7	39.6	74%	34.9	26.2	75%	69.2	61.7	89%	1.7	1.7	100%	209.3	154.9	74%
Total LBL, DF LAW & Project Services	4,906.3	2,363.7	48%	923.1	656.0	71%	655.3	417.1	64%	1,498.3	959.4	64%	1,450.0	136.8	9%	379.6	194.4	51%
PT/HLW/SS Percent Complete Status Frozen as of September 2012 (due to project rebaselining efforts)																		
High-Level Waste	1,478.6	922.1	62%	364.4	325.2	89%	433.9	349.4	81%	561.1	243.2	43%	119.2	4.4	4%	n/a	n/a	n/a
Pretreatment	2,517.3	1,410.5	56%	761.7	645.8	85%	679.9	380.4	56%	890.0	378.6	43%	185.8	5.6	3%	n/a	n/a	n/a
Shared Services	4,726.9	3,632.6	77%	1,047.0	977.9	93%	451.7	395.0	87%	1,436.5	1,143.0	80%	453.5	133.2	29%	1,338.1	983.5	73%
Total HLW/PT/SS	8,722.8	5,965.2	68%	2,173.1	1,948.9	90%	1,565.5	1,124.8	72%	2,887.6	1,764.8	61%	758.5	143.2	19%	1,338.1	983.5	73%
Undistributed Budget	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total WTP	13,629.1	8,328.9	61%	3,096.2	2,604.9	84%	2,220.8	1,541.9	69%	4,385.9	2,724.2	62%	2,208.5	280.0	13%	1,717.7	1,177.9	69%

Source: Preliminary WTP Contract Performance Report - Format 1, Data for March 2016

Note: In September 2012, the LBL Replan was incorporated into the project OTB baseline resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility function to-date percent complete values. In October 2012, the PT/HLW/SS Interim Work Plan was incorporated into the project OTB baseline resulting in decreases to the PT/HLW/SS facility budgets, this was due to a work scope shift from the Distributed budget to UB. Percent Complete Values shown for PT, HLW and SS have been frozen with the September 2012 values due to the Interim Work Plan and budgets being moved into UB. UB value for the project for PT/HLW/SS is \$2,014M. The percent complete values for the Total WTP are the current total LBL BCWP added to the frozen HLW/PT/SS BCWP values. In March 2014, Project Controls and Project Management work scope was moved out of Shared Services control accounts into the facilities with new control accounts being set up in the facilities. These will now be seen under Project Management/Shared Services by facility. The Shared Services PMB value has not been changed to reflect this change due to the freeze on HLW/PT and SS and the budgets remaining in UB. October 2014 data reflects the incorporation of Direct Feed LAW and the split of Shared Services into LBL Facility Services and Project Services. March 2016 LBL percent complete data is a total of LAW-BOF-LAB-DFLAW and LBL Facility Services. The Project Services Allocation account (aPSA), as shown on the CPR Format 1, is not added to LBL for percent complete purposes.